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VOL. CLXXXI AUGUST 24, 1951 No. 5662


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## THIS WEEK'S NEWS

*COVENTRY CATHEDRAL COMPETITION is reviewed, the assessors' and winner's reports given and the five principal designs illustrated in a special section.* *p.* 237

*A RECOMMENDATION to members arising out of the R.I.B.A. Council's deliberations on the operation of the London Builders' Conference is published.* *p.* 265

*THE SECRETARY OF STATE FOR SCOTLAND has circulated Scottish local authorities recommending the design of houses securing some reduction in cost.* *p.* 268

## COVENTRY CATHEDRAL

THE assessors to whom the Cathedral Reconstruction Committee and the R.I.B.A. entrusted the task of deciding the competition for the new Coventry Cathedral are to be congratulated both on their celerity (surely a record for a competition of this magnitude) and on their choice. Examination of the 219 sets of designs which are now on exhibition in Coventry shows evidence of much industry, but of little inspiration and less religious feeling. In an age when some power stations are uncommonly like cathedrals, it is not surprising that some cathedrals should look like power stations. Of those schemes which appear to have drawn upon devotional inspiration, the authors of several would seem to have put themselves out of the running by failure to conform either to the conditions of competition or to local sentiment, but it will not be seriously challenged that in the winning design the Diocese has got a scheme of great imagination and sensitivity and in Mr. Basil Spence, the architect, a man who, given the opportunity, will create a building of great beauty and atmosphere.

The Reconstruction Committee is fortunate in having the greater portion of the funds necessary to build. Whether it can get licensing sanction to make a start is not as yet established. Here is surely an opportunity to bring fresh hope to the fast-vanishing stonemasons' trade and to help in resuscitating an industry which is fast perishing from lack of opportunity and fresh blood. We hope this factor may be kept well in mind by the authorities.

## A FAIR PRICE FOR BUILDING

LAST week we published a letter from Sir Alfred Hurst commenting upon our leading article of July 27, which was prompted by the Royal Institute of British Architects' reaffirmed disapproval* of the methods of the London Builders' Conference. Our original article was an honest attempt to examine both sides of the question, and although the article may have come down on the side of the Royal Institute of British Architects we think it was more dispassionate and unbiased than the letter of the chairman of the Conference.

Sir Alfred made no complaint on the facts regarding the Conference as we presented them, but he objected to our statement in that it did not go far enough and, as he said, was based on the assumption that "all competition in the building industry is vicious and suicidal." This was not our assumption ; it was based upon the chairman's own declarations that "there are very few firms, even in the highest class, that will not submit a wholly inadequate price on occasion to make sure of getting a particular contract," and that these "occasions are so numerous as to be the rule rather than the exception." There was justification therefore in adopting Sir Alfred's implication that competition in the building industry is vicious and suicidal. But we do not think our arguments are nullified if normal circumstances are not as Sir Alfred implied ; indeed they have a greater force if the prices resulting from tendering under present conditions are adequate.

The operative, the architect and the surveyor have completely abandoned price competition (Sir Alfred thinks for very sound reasons) as a method of determining their remuneration and he asks what opprobrious epithets we reserve for these. Our answer is : None. The operative had a long and hard fight to establish a living wage ; when he secured this through the National Joint Council *as a minimum* he immediately found ways and means of improving this wage ; he demanded and received bonuses on output and now wants the National Joint Council to recognise payment by results as fundamental to the wage structure. The employers and the operatives (with the suppliers of materials) are the commercial side of the industry, and it is right and proper that they should seek to determine their remuneration on a commercial basis. To link the professional elements of the industry with these commercial elements is to ignore the basic difference between the professions and commerce, a difference which is not peculiar to the building industry, but which affects lawyers, accountants, doctors and all professionally qualified men remunerated on a fee basis.

The next point upon which we are challenged is on our statement that "Architects must continue to protect their clients' interests by nominating specialist sub-contractors to carry out (*not* on a price competitive basis) all the more highly skilled operations." This is merely a statement of fact ; fact recognised by the Code of Practice relating to the letting of sub-contract works agreed between the Royal Institute of British Architects and the National Federation of Building Trades Employers 20 years ago. Many firms calling themselves building contractors had degenerated into organisers, "agents-cum-pay-clerks" as we described them in our original article. Only one or two trades were carried out by

* See also page 265 this week.

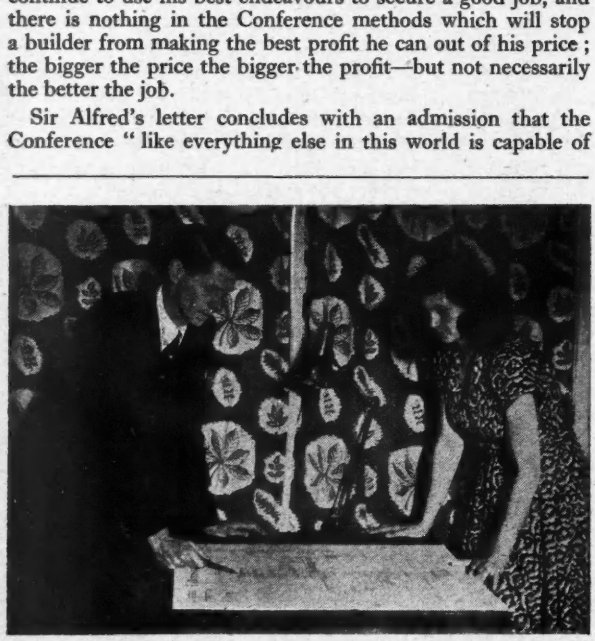
these so-called building contractors and all other trades were sub-let. The horrible process of farming out these sub-trades to the cheapest bidder, the beating down of a reputable sub-contracting firm to the price of the lowest disreputable tenderer and the abuses and bad workmanship to which this led, forced the architects to protect their clients' interests by nominating specialists to carry out the more highly skilled operations. That this has led to these specialists being nominated *not* on a price competitive basis may be unfortunate. It *is* unfortunate if carried to excess, but any problem hereby created was solved 20 years ago by the agreement of the Code of Practice already referred to. Only the building contractors are to blame if, as the Conference Chairman has said, "it is not uncommon to find as much as two-thirds of a contract consisting of fixed amounts" specified by the architect to be carried out by specialist sub-contractors.

Our "agent-cum-pay-clerk" expression might have been differently expressed, but we meant the same thing as is envisaged by the chairman of the Conference himself, who considers that the time will come when the main contractor, becoming more and more the business manager of the enterprise, will be remunerated like the architect on a fee basis.

The Simon Committee declared "there is only one guarantee of a good job; a competent and honest builder who has obtained a contract at a fair price." Surely the whole essence of this axiom lies in what is a fair price? The price is not something forced on the builder; he submits his own tender and it is only his own fault if, as Sir Alfred Hurst alleges, he generally submits an inadequate price in fear of losing the contract. The interposition of the Conference calculating machine between the unfettered tenderer and the architect does not, to our mind, ensure a fair price. As we said in our original article, and here repeat, it merely gives a better prize to the winner and consolation prizes to all the losers.

According to its chairman the Conference ensures that there is no longer that fundamental antagonism between an architect anxious to get a good job and a builder seeking to make a profit out of an inadequate price. The architect must continue to use his best endeavours to secure a good job, and there is nothing in the Conference methods which will stop a builder from making the best profit he can out of his price; the bigger the price the bigger the profit—but not necessarily the better the job.

Sir Alfred's letter concludes with an admission that the Conference "like everything else in this world is capable of improvement," and a plea that the Royal Institute of British Architects and the Royal Institution of Chartered Surveyors should take part in discussions to secure such improvement. Such conferences might be most helpful but we think the sponsors of the Conference must produce something better than the present methods as a basis for discussion.



*Seen above are J. D. Meade Taylor and Joyce V. Wilson, A.A.R.I.B.A., whose winning design in the competition for a proposed Marine and Technical College, South Shields, was illustrated in our last issue.* *Some notes on their design will be found on page 269.*

## *ADVERTISEMENT versus AMENITY*

THE Ministry of Local Government and Planning has rather belatedly, owing probably to its recent reconstruction, issued a circular* to local authorities reminding them of the powers they have received for the control of outdoor advertisements. At the same time the Ministry seems very strongly, if not unduly, impressed with the difficulties in taking action affecting important commercial firms that have, for a long time past, had an almost free hand in this direction, saying "that the challenge procedure should be used in an orderly and gradual way." A systematic review of compact areas is advised, with a view to eliminating advertisements injurious to amenity or dangerous.

The practices now coming under control have for years been so obviously destructive of the dignity and beauty which should characterise the building frontages in the central areas of our great cities that their regulation and restriction have been frequently demanded by those who have these qualities at heart, but it is unfortunate that so large a proportion of the general public can be influenced by this type of publicity and are indifferent to its demerits.

This state of affairs has encouraged such a mass of large-scale inscriptions and other signs spread over the face of the buildings in "important" positions that all semblance to architectural design has been lost, while in a few cases the competition has been so keen that the efforts have defeated their own ends and nothing but confusion is the result. If these practices were to continue, the only services the architect could offer to commercial buildings would be in the form of designs suitable as a background for advertisements.

Advertisement is such a dominant factor in present day economics that the problem cannot be solved by limited prohibitions; it is undoubtedly desirable to remove advertisements from the fronts of prominent buildings and perhaps to limit the extent to which they appear on public vehicles, but it might be reasonable to devise some means by which they could be artistically presented. Window displays in shops are often commendable and even written inscriptions can be harmonised with their background if kept in scale and well designed. Such inscriptions would be just as noticeable on a smaller scale as those sprawling over a building at random and competing with each other. It would be rational if proprietary articles could be related to places where they would be on sale, though this might be difficult to organise. So far we have in Britain escaped advertisements in most of the cinemas and on the radio, but it is doubtful if these are worse than those covering the frontage of buildings not designed to take them.

A mere frontal attack on advertising in general would, under existing conditions, be a grave mistake but where this activity is in antagonism to the reasonable amenities of life, it is obviously right that the offending features should be revised in a direction that would not unduly affect legitimate business interests. It may be found that there are forms of advertisement that might add ordered beauty instead of chaotic annoyance in our urban scene; let our imaginative artists get to work, as they have occasionally done in the past, and show us what can be done in this direction, not in the previous detached examples, but as contributing to the street picture as a whole. This seems to us the most hopeful proposition for the future.

* Circular No. 52/51, Ministry of Local Government and Planning. H.M. Stationery Office, 2d.

# COVENTRY CATHEDRAL COMPETITION

## THE DESIGNS REVIEWED

*by A. DOUGLAS JONES, DiplArch(Liv), FRIBA*

ON Wednesday, August 15, it was announced that the competition for a design for a new cathedral at Coventry had been won by Mr. Basil Spence, O.B.E., F.R.I.B.A., of Edinburgh. Mr. Spence is therefore awarded the first premium of £2,000. The cathedral is to seat 1,250, and £825,000 is available for building, of which the War Damage Commission will supply the major part.

The competition was open to members of the British Commonwealth. In the winter of 1940, during one of the severest air raids on this country, Coventry Cathedral was almost destroyed. Incendiary bombs set the roof and ceiling alight which, in collapsing, pulled down the clerestorey and all the pillars of the nave, but the fine tower and spire, the south porch, and a major part of the aisle and sanctuary walls were left standing. During the past few years the area within these walls has been cleared of rubble and laid out with grass lawns and gravel paths and re-used for worship.

### AN IMPORTANT DECISION

One of the important questions that competitors of this competition had to decide was what to do with these remains which, as anyone who has seen them will confirm, are most impressive. Fortunately Mr. Spence is going to retain them in so far as this is technically possible, and the importance he must have attached to them is shown by the fact that it is the first subject with which he deals in his report.

All competitors were obliged to retain both the tower and spire and the south porch, but it was interesting to notice that the competitors from abroad—who presumably had not the advantage of seeing the ruins—placed their new buildings on the site of the old. This raises the question of whether a number of the other 219 entrants were also unable to visit the site. However, the erection of the new cathedral within the precincts of the old together with the preservation of the ruins, is going to mean some overcrowding from a visual point of view.

### FLEXIBLE CONDITIONS

The conditions of the competition were as flexible as it was possible for them to be, and an east-west orientation for the new cathedral was not necessarily required. This allowed competitors four or five alternatives in the placing of the new building. Those who retained the ruins could either orientate their building north and south in the opposite direction to the old cathedral—and this is what Mr. Spence has done—or they could erect their cathedral adjacent to and parallel with the ruins, and this is the course which the second and third prizewinners have followed.

Mr. Spence's solution makes the problem of levels somewhat more acute, but the gains of doing it far outweigh the disadvantages, because the composition which is obtained between the three main elements (the ruins of the old cathedral, the new building and the adjoining Holy Trinity Church) is infinitely more satisfactory than any other arrangements and a pleasant open space is retained between them.

Competitors who decided not to keep the ruins would naturally tend to place their new building on the site of the old in order to maintain the open character of the site. One competitor, either for this reason or because of air-raid consciousness or even, perhaps, in order to get rid of the difficult problem of style, placed his building entirely underground.

### THE WINNER'S SKILL

In many cases buildings were badly placed on the site and many seemed to sprawl aimlessly across it. There were numerous other problems of planning which the winner has handled with consummate skill. He retained the position of the altar in the old sanctuary for use at open air services, and he arranged the main entrance porch of his cathedral in an adjacent position, on the axis of St. Michael's-avenue, to give cover to these services when necessary.

The Chapel of Unity, to seat 200 members of both the Free Churches and of the Church of England, was regarded by the clergy as a most important element in the design, but it was difficult for competitors to avoid losing its identity in that of the cathedral because of its small size. Many ingenious ways were employed to get round this problem but again Mr. Spence's very direct solution was the best; he placed it boldly in an important position both on the site and in its internal relationship to the nave and main entrance; he detached it loosely from the main body of the church and contrasted the two shapes; and he gave it a vertical emphasis as opposed to the horizontal emphasis of the nave. Some competitors placed this chapel in the traditional position of the Lady Chapel behind the High Altar, but while this solution to the problem was ingenious it failed to give it the necessary emphasis.

### AN UNINTERRUPTED VIEW

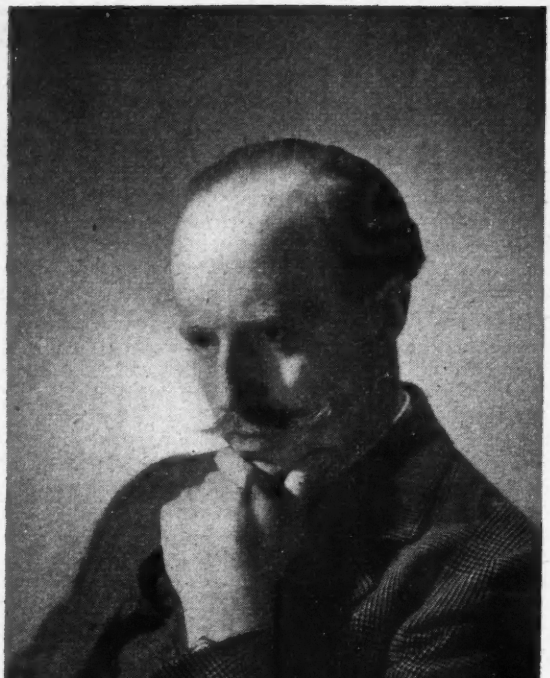
Both the winner and a number of other competitors arranged the windows of the nave wall obliquely in order to reduce the effect of glare. This treatment led to the formation of a recess by each window, and these were used as hallowing places. In Mr. Spence's scheme, the nave and chancel are of the same width to give the congregation a clear uninterrupted view of the altar.

### THE OTHER DESIGNS

Mr. W. P. Hunt, A.R.I.B.A., of Cambridge, was awarded the second prize of £1,500. He retained the lines of the existing aisles and sanctuary walls and incorporated them into a cloister, and he orientated his new building alongside. Mr. Hunt uses the old sanctuary as his new Lady Chapel, and he balances it on the other side at the end of the North transept with the Chapel of Unity. Although Mr. Hunt's elevations are among the best of the competitors, they are perhaps over-simplified.

Mr. A. W. Kirby, A.R.I.B.A., of Swindon, was placed third and awarded the prize of £1,000. His plan closely resembled the second prizewinner's. The line of the ruins has been more or less observed though they themselves appear to have been replaced, and the old sanctuary has been removed to make way for the new Chapel of Unity. The choir has been put to the east of the altar and an important north entrance has been formed at this point in addition to one at the west. This north entrance gives access to the Christian Service Centre and to Prior-street, but it appears to have been given undue emphasis and it is placed in a position which may not be entirely agreeable when used by late comers. The assessors considered that this " . . . design lacks distinction in quality of architectural detail."

Of all the 219 designs submitted, Mr. Spence's stands out head and shoulders above the others. He, of all of them, appears to have best grasped the essentials of the problem, and his placing of the parts of his cathedral is beautifully simple and well articulated, but the design—which consists of a shell-concrete vault with walls of local stone—is somewhat austere and inevitably lacking in the quality of our Great Cathedrals.



*MR. BASIL SPENCE, OBE, FRIBA, FRIAS, whose design has been placed first in the Coventry Cathedral Competition*

### *QUESTION OF STYLE*

Very wisely the assessors laid down no conditions about style, though perhaps some people would have liked them to do so to whom "Gothic" is synonymous with ecclesiastical architecture. Because of the absence of a twentieth-century style in architecture, the design of a modern cathedral is an almost impossible task. The architect can use the traditional forms which are so well known and are therefore so easily understood by worshippers, but then the building will be merely an echo of the past, and will lack the clarity of the original; or, alternatively, he can attempt the impossible and design in a new style which has not yet evolved. Alterations are bound to be unsatisfactory and cannot lead to great architecture.

Apart from the three premiated designs two additional ones were specially mentioned The first of these was by Mr. Rolf Hellberg, F.R.I.B.A., of Coventry. He disregarded an important injunction in connection with the planning and so precluded his design from being premiated. The assessors considered that this scheme was " . . . of great merit with an inspiring interior, and an original and interesting conception of structure." Mr. Hellberg sited his building alongside the ruins of the old cathedral, a part of which he removed. The method of lighting which was related to this arrangement of chapels was ably carried out as were the hallowing places, and his elevations were among the most interesting. Although this scheme was very directly handled it was less well presented than the winner.

The other design which was specially mentioned was by Messrs. Tischler and Hildebrand, AA.R.I.B.A., of London. Their scheme was also placed adjacent to the ruins and the line of the aisle walls retained. If this design was perhaps overglazed, it was more attractive than most, but the chapels were arranged around the east end of the new cathedral in a rather clumsy fashion, and the placing of the Chapel of Unity on the first floor may not have been regarded as entirely satisfactory.

### *GENERAL IMPRESSIONS*

General impressions after seeing all the 219 schemes are that many competitors appeared to have failed to give adequate consideration to the placing of the building on the site, and this seems to be borne out by those designers whose buildings aimlessly cut into the ruins, or whose buildings run obliquely across the site. Many schemes were unbelievably complex and none had the direct simplicity of the winner (one scheme divided the congregation up equally between the nave and the north and south transepts). This tortuousness of some of the designs was reflected in the drawings, many of which required considerable patience and often the faculty of clairvoyance to interpret. On one site plan much of the lettering was actually upside down.

It does seem to be about time that in competitions such as this both the drawings required and their method of presentation should be standardised so that there would be an easily understood relationship between all the sets of drawings. Perhaps the use of axonometric or isometric drawings might also help. At least site plans could be drawn so that the plan of the building on them lies in the same direction as the larger scale plans.

The designs divided themselves up either into a "Modern" form or into adaptations of Gothic, and the influence of Scott's Liverpool Cathedral was clearly visible in some; but it would seem to be a triumph of hope over experience to enter for a competition such as this and to imagine that it is possible for an architect to change church liturgy in order to establish a preconceived idea of what modern architecture should be.

## *THE ASSESSORS' AWARD AND REPORT*

THE result of the open competition for Coventry Cathedral was declared on August 15, and the result was published in our issue of August 17. We now publish the three prizewinning designs and those two accorded special mention, together with the award of the assessors (Sir Percy Thomas, Mr. Edward Maufe, R.A., and Mr. Howard Robertson, A.R.A.) and the report of the winning architect, Mr. Basil Spence, O.B.E., F.R.I.B.A., F.R.I.A.S.

### *REPORT BY ASSESSORS*

We have examined the 219 designs which have been submitted in this competition. Although we consider the general level of the designs is disappointing, yet we are very happy to report our conviction that the competition has succeeded in bringing forth several designs of great merit, and one of outstanding excellence.

We make our award as follows:

First premium (£2,000) to design No. 91. [Basil Spence, O.B.E., F.R.I.B.A., F.R.I.A.S., 40, Moray-place, Edinburgh.]

Second Premium (£1,500) to design No. 202. [W. P. Hunt, M.A., F.R.I.B.A., A.M.T.P.I., 1, Scroope - terrace, Cambridge.]

Third premium (£1,000) to design No. 11. [A. D. Kirby, A.R.I.B.A., 10, Victoria-road, Swindon.]

*Design No.* 91.—In selecting this design we not only feel that it is the best design submitted, but that it is one which shows that the author has qualities of spirit and imagination of the highest order. He lets the conditions grow under his hand to produce a splendid cathedral, and as the conditions are unusual, the resulting conception is unusual, revealing the author's ability to solve the problem of designing a cathedral in terms of contemporary architecture.

The author in his report stresses the beauty of the existing destroyed cathedral as an eloquent memorial to the courage of the people of Coventry, and states it as his opinion that the major part of it should be allowed to stand as a Garden of Rest, treating it as an atrium to the new cathedral which "should grow out of the old cathedral and be incomplete without it." The interior fully meets the require-

ments of liturgical movement. The altar is not narrowly confined within the usual chancel but is open on its sides to the full width of the nave. The hallowing places are admirably treated, being recesses canted toward the congregation from the wide passage aisles with lighting which falls only from the side on to beautifully designed sculpture appropriate to each hallowing place, avoiding all glare to the eyes.

The Chapel of Unity is not a mere adjunct to the cathedral but a building elemental in form and of great significance. It is independent of, yet an integral part of, the Cathedral; separated from the nave only by an open metal screen. The author strongly advocates that this chapel should have its axis on the font, and this is what he has devised, making the font in the cathedral of special importance.

The shape of the new cathedral is impressively simple, the existing tower being an essential part of the design. The vaulting of the interior is of reinforced concrete; the walls externally and internally are of the local pink-grey stone. The half-inch details show that the author is capable of most skilled and sensitive design. The chapter house, the Christian Service Centre and warden's and caretaker's houses have much architectural merit, in keeping with the cathedral itself. The estimate of cost, clearly set out in the able report, is in our opinion reasonable.

*Design No.* 202 provides a very convincing solution to the problem of layout and the grouping of the various elements of the design. The existing tower and portions of the ruined cathedral are incorporated into a cloister of considerable charm, integrated with the new cathedral. This also is a design contemporary in character which has unusual qualities of simplicity and distinction.

The drawings, particularly the half-inch details, suggest that the author has not fully developed the basic potentialities of his design. Nevertheless, it is well worthy of second place.

*Design No.* 11 is a competent and well-thought-out scheme, with a layout somewhat similar to that of the second premiated design. The plan and composition of the masses are impressive, but the design lacks distinction in quality of architectural detail.

Apart from the premiated designs there are two to which we wish to accord Special Mention, No. 128 and No. 8.

*Design No.* 128 [Rolf Hellberg, F.R.I.B.A., Coventry] is of great merit with an inspiring interior, and an original and interesting conception of structure. Unfortunately, a failure adequately to comply with certain of the planning conditions precludes it from being considered for an award.

*Design No.* 8 [Tischler and Hildebrand, London] is a well devised scheme, carefully worked out in detail with attractive features, but lacking that architectural character and atmosphere essential to a cathedral.

Among the remainder, Nos. 81, 111, 114, 125, 141, 173 and 174 all exhibit considerable merit and present special points of interest; but it is evident that the majority of competitors found the problem a difficult one, and a large number failed to appreciate the requirements. Many were able to produce satisfactory plans but few were able to build these up to form satisfactory cathedrals.

[The authors of these seven schemes are: No. 81, Albert D. Cordiner, Glasgow; No. 111, D. Lumsden and Harry Gibberd, Birmingham; No. 114, A. E. Richardson, Houfe, Holland and Stammers, London; No. 125, Terence Carr, Woking; No. 141, The Peter Dunham Group, Luton; No. 173, J. E. Charlewood and Fitch, Newcastle-on-Tyne; No. 174, Tom Mellor and J. A. Ashworth, Lytham St. Annes and Rochdale.]

## THE WINNER'S REPORT

FOLLOWING are extracts from Mr. Spence's Report.

Through the ordeal of bombing, Coventry was given a beautiful ruin; the tower and spire reveal themselves for the first time in an arresting new aspect from the ruined nave. As the cathedral stands now, it is an eloquent memorial to the courage of the people of Coventry. It is felt that the ruin should be preserved as a garden of rest, embracing the open-air pulpit and stage, and the new cathedral should grow from the old and be incomplete without it.

The altar is the heart of the new building; it can be seen from the ruined nave. The five glass screens dividing the porch from the nave are of clear glass, and, on great occasions and on warm summer evenings, can be lowered so that the cathedral is open. Saint Michael's-avenue, the traditional right of way, remains, except that it passes under the cathedral porch within sight of the altar.

As the life of Our Lord commenced with a star, the first element of the cathedral plan is the Chapel of Unity, star-shaped, and is on the axis of the font. Then, turning towards the altar, the nave is flanked by the hallowing places and the windows shining towards the altar and representing the phases of life. This sequence culminates with the altar built by Mr. Forbes after the bombing of the cathedral; it is surmounted by the charred cross, and backed by a great modern tapestry representing the crucifixion.

*The Chapel of Unity:* Much thought has been given to the position of the Chapel of Unity in the cathedral plan. It must express unity, and is the Chapel of the Holy Spirit; it has its place in Pentecost, and, if Baptists and Methodists are to worship according to their consciences and with sincerity, it may be wrong to be completely within sight of the altar. The Act of Baptism, however, is another matter, and as unity is a primary consideration, the chapel is on the axis of the font.

The chapel's shape represents Christian unity; in elevation it is shaped like a crusader's tent, as Christian unity is a modern crusade, and an attempt has been made to use dynamic crystalline forms which are contemporary, yet have their roots deep in the past.

*The Font:* Entering from the porch, the first important incident is the axis of the Chapel of Unity and the font. The font cover is conceived in a light steel sheet; a tall tapering form designed after the manner of a fir cone, the parts resembling ploughshares getting smaller as they near the point. Behind the font is the baptistery window composed of 195 lights, 172 of which are of uniform size, and the stained glass panels would not be too expensive as donations from the public.

*The Hallowing Places:* As suggested in the conditions, the hallowing places are on the outer walls of the cathedral. These are sculptured recessed with ideal lighting for bold relief.

Great importance is given to the stained glass windows; with the exception of the baptistery windows and those lights over the entrance to the Chapel of Unity, all windows shine towards the altar. Behind the font the glass is very pale, almost white, with a slight tint of rose and pale blue, and moving towards the altar, the next windows are composed in tones of green and yellow representing youth. The next pink and red, representing puberty, the next—the age of experience—are multi-coloured, then the age of wisdom—the windows are deep blue and purple—and, finally, the altar windows of golden glass. As in life, the colour of the windows is revealed only as you reach each stage—the past is known, the future is not. Only when the altar is reached the whole range of colour is seen for the first time.

The author of this design does not see this building as a planning problem, but the opportunity to create a Shrine to the Glory of God.

### THE PLAN

The plan divides itself simply into four distinct elements: the old cathedral, the cathedral porch, the new cathedral containing the chapel of unity, guild chapel, Lady chapel, children's chapel, and the chapel of the Resurrection, with all the attendant rooms, and finally, the Christian Service Centre group, which includes the warden's house and the caretaker's house. Vehicle access is centrally placed off Priory-row, and the service road leads from Prior-street to a yard which serves the heating chamber and all three kitchens (The Christian Service Centre, the warden's kitchen and the caretaker's kitchen). Foot access to the Christian Service Centre is obtained from both the car park as well as Hill Top. Access to the crypts is from under the cathedral porch.

### GENERAL STRUCTURE

Structurally, this building is planned on simple lines. A reinforced concrete vault, designed as lightly as possible, supported by tall elegant columns of steel cased in concrete, or post-stressed concrete units. Walls are of solid stone construction pierced with windows. The floor is concrete with a finished surface of patterned stone, and the foundations are of concrete.

*The Vault:* It is proposed that the vaulting should be shell concrete approximately 2½ in. minimum thickness. Each vault to have reinforced concrete edge trimming beams for restraint, and these are to extend above the vault, and will con-

stitute a grid of continuous beams extending from wall to wall and longitudinally down the building with point supports from columns. The shuttering of the soffits is to be very carefully lined with narrow boarding to leave a regular and permanent pattern of board marking.

The infilling between ribs and over the vault is to be of Vermiculite screed (minimum depth 2 in.) topped with 1½ in. of cement screed. The roofing is of copper properly laid on roofing felt (if copper is available).

*Columns :* It is hoped that it may be permissible to use a slenderness ratio of not less than 200 in view of the support obtainable from the walls. Compound stanchions are proposed of heavily plated cruciform sections to provide the required radius of gyration. Should it be necessary to work to a ratio of 150, the diameter of the columns—at present shown as 20 in. over all for a height of 60 ft.—will require to be somewhat increased. This would, of course, require to be the subject of detailed calculations. The compound stanchions would be completely encased (minimum cover 1½ in.) in concrete of minimum test cube strength of 6,250 lb. per sq. in. at 28 days, which should be compacted by external vibration. It is proposed to reuse for all columns, in lifts of approximately 6 ft., a standard metal drum shuttering faceted on the internal faces. The final column finish is to be bush hammering.

*Walls :* The slightly corrugated shape of the stone side walls, and their angled setting to the main roof vault in conjunction with the mesh of stone window heads and cills which connect the ends of bays, produces an immensely strong saw-toothed wall in which the window sections tend to act as integral buttresses.

This wall provides maximum lateral support to the vault to meet both live and dead lateral loadings, and, in view of its strength, it may also be used to relieve the columns of a proportion of the vertical roof component through the grid of continuous beams, thus permitting a relatively light column section to be used.

*Type of stone :* It was considered essential that the same stone, or a similar variety to that of the old cathedral, be used. Where possible, mouldings and other expensive masons' carvings, have been eliminated. Simple chamfers are used, and decoration is in the form of sculpture which is not much more expensive than an elaborately moulded wall surface carried out by masons. This stone is used for the Christian Service Centre as well.

The walling below the main floor level, as appears on both east and west elevations, is in grey granite blocks backed by brick. On the west elevation, this embraces the choir vestry, and ceases where it joins the warden's house. On the east elevation, it butts on to the guild chapel corridor.

The floor slab carries the heating elements. The finished surface is composed of a pattern of stone slabs of varying cool colours to contrast with the pinky-grey walls. Under the porch, however, cobbles are interspersed with stone slabs to catch surface water which may permeate from the outside. Foundations are normal.

## *DETAILED DESCRIPTION*

In order to establish which parts of the cathedral can be left standing, a detailed examination will be required. It is the intention to preserve as much of the old as possible, and it will be necessary to protect the upper surfaces by some method of damp-proofing (preferably lead if obtainable) to prevent deterioration through the years. The old cathedral should then be planted out with trees, shrubs, and flowers, and certain creepers should be encouraged to grow over the old walls, and the large paved area adjacent to the porch would serve for the congregation during open-air services.

A cross of English oak replaces the charred cross, and a new altar of grey granite replaces Mr. Forbes' altar. The pulpit and canopy are of concrete with exposed aggregate. The open-air stage is unaltered from its existing position, as this has the ideal orientation, and gives an excellent setting for religious plays.

*The porch* grows from the old cathedral, and it has been designed in the lightest and most unobtrusive way as an introduction to the new building. The spacing of the five bays which form the mathematical unit on which the whole plan has been designed are taken from the old cathedral.

The concrete groined vault is supported on concrete pillars which are clothed in stone.

*Nave, Choir and Aisles :* The five glass screens dividing the porch from the nave are capable of being lowered into the floor. This has been done successfully in the crematorium at Stockholm, and assurance has been given by engineers here that this is not a difficult task, and relatively low power is required to lower and raise these screens by the careful use of counterbalanced weights. Each screen has a set of doors which come into operation when the screens are in the raised position.

*Seating :* The nave accommodates the seating. The area indicated on the plan is the extent of the heated floor slab. The total number of chairs accommodated on this slab is 1,374, and as the aisles are 18 ft. wide, there should be no difficulty in adding the 250 extra seats asked for in the conditions ; a method has been shown on the main plan. The spacing for the chairs has been taken as 2 ft. 10 in. back to back by 1 ft. 8 in. wide.

The choir stalls are designed to accommodate 40 choir and an organist and console ; on the opposite side, stalls for 24 clergy and a bishop's throne. They are constructed in laminated wood moulded to shape, and the ornamented areas are fretted out and carved by hand. Brass fittings are introduced as connections, having a protective dull finish.

*Pulpit and Lectern :* Looking towards the altar, the pulpit is on the left and the lectern on the right. The pulpit is constructed of Portland stone with a laminated wood sounding board designed to be acoustically correct. The lectern is the traditional brass eagle. The bishop's throne is designed for fabric, probably a brocade, cobalt blue in colour.

*The Tapestry :* The tapestry is backed by a stone wall, and is hanging from great bronze p ns built into the wall. This tapestry, for which £30,000 has been allowed in the estimate, could be designed by a great contemporary artist, or a competition might be organised, and the firm who exhibited modern tapestries in the recent Arts Council Exhibition in London have been approached, and have the necessary scope to undertake this commission. This would be the largest tapestry in the world, and would be the most beautiful background for the altar and the charred cross. The subject of the tapestry is the Crucifixion.

*Organ :* Space for the organ is allowed for over the ways to the children's chapel and the Chapel of the Resurrection.

## *THE CHAPEL OF UNITY*

The Chapel of Unity is simply constructed on a concrete foundation with large diamond-shaped mullions of stone which support the roof of concrete. Attention is drawn to the fact that the floor is slightly dished, and the star pattern should be of golden stone and the remaining infilling of blue marble. The central symbol of the Holy Spirit is of mosaic.

*The Children's Chapel :* The wrought-iron screen in the children's chapel is composed of a pattern of flowers and animals, and above the transome, the firmament, with the Virgin Mary and the Infant Christ set in an area of golden stars. The chapel itself may be decorated with a mural in a simple understanding technique. This chapel seats 30.

*The Lady Chapel*, which seats 70, is placed in its traditional position behind the altar. The walls are of stone, and the roof of deep concrete beams which should be brightly coloured in rich medieval colours of green, red, white, black and gold.

*The Chapel of the Resurrection* balances the children's chapel, and seats 30. Behind the altar is an incised carving on Portland stone developing the idea of the three crosses which are in the existing Chapel of the Resurrection.

*The Guild Chapel*, to accommodate 80, gets its character from the tall mullioned walls. A feature of this design is that the windows can represent all the trades, and the stained glass designs can incorporate the Arms of the various guilds.

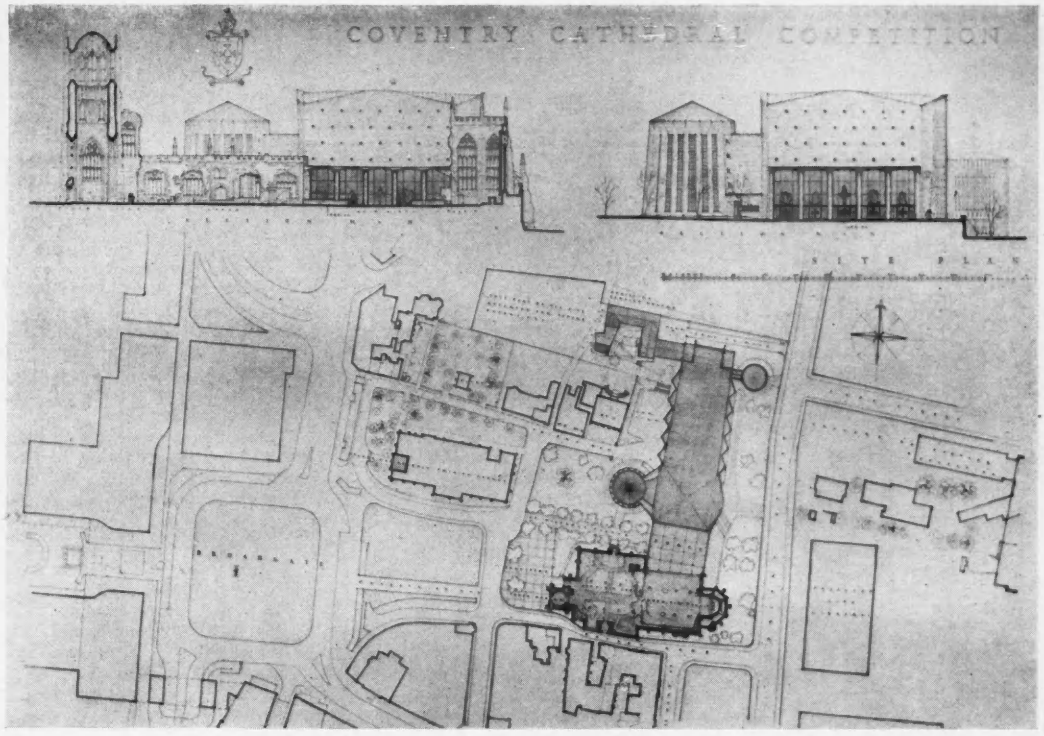
## *LOWER GROUND FLOOR*

The lower ground floor is designed as a working adjunct to the main cathedral above. It accommodates the chapter house, the provost's vestry and his secretary, the muniment room and the sacristy, and choir vestry, which is provided with lockers on one end wall, and also with the necessary cloaks and lavatories. A large assembly area is also provided. The provost's vestry has an excellent outlook towards the new city library and art gallery, and has a south-easterly aspect. The secretary's room is conveniently placed in relation to the provost's vestry ; a small cloakroom and lavatory are provided.

The Chapter House is designed to accommodate 30 members of the Chapter, seats being provided correctly upholstered in the window recesses. Thirty-seven recesses are shown on the plan.

(*Continued on page 242*)

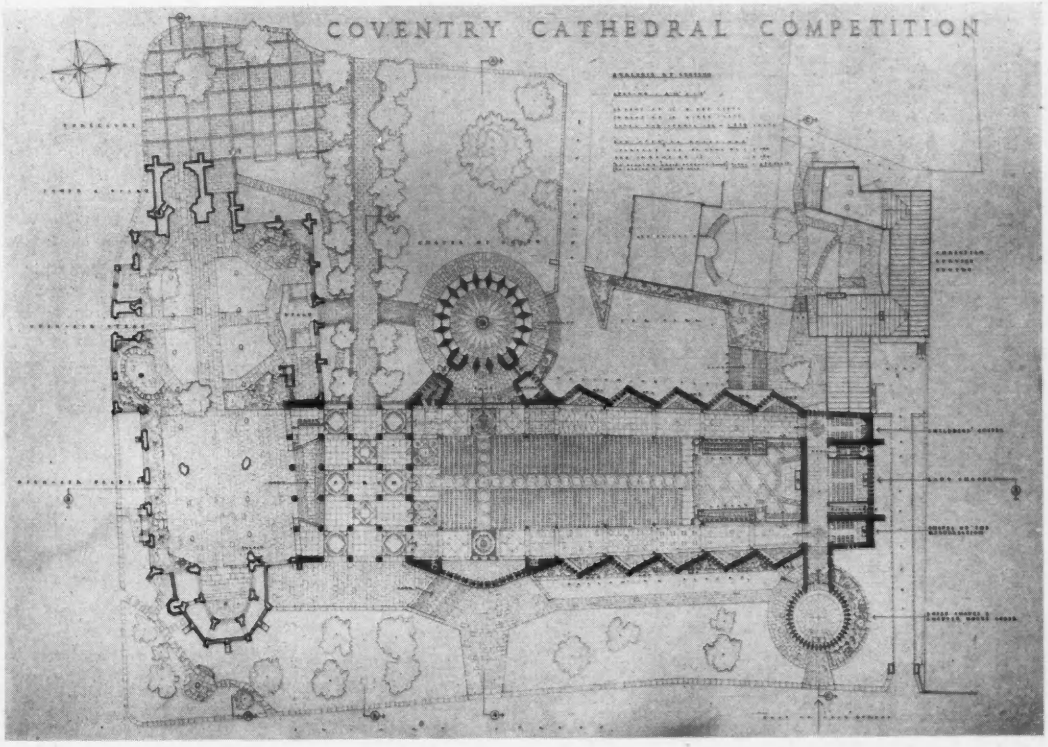
August

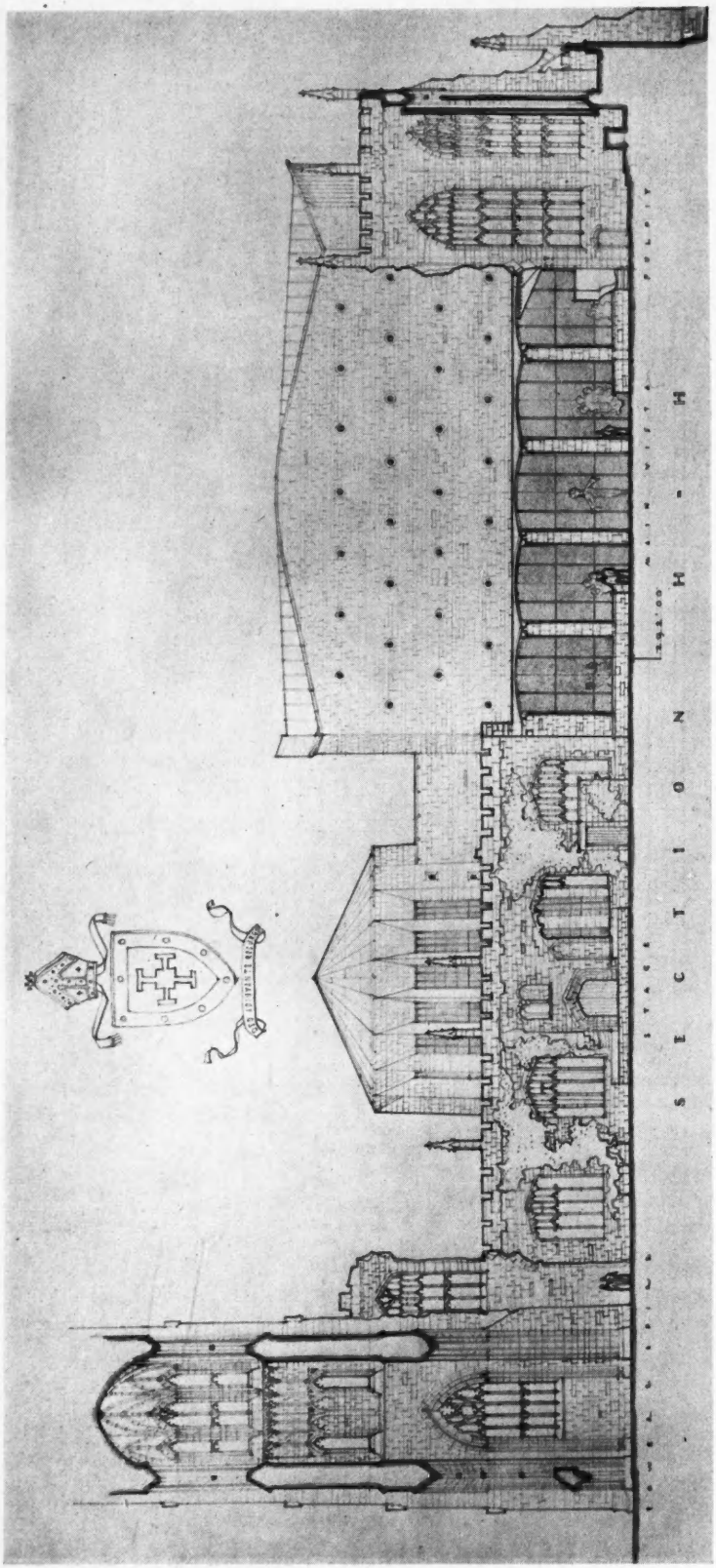



*Site plan and cross-section. Below : Main floor plan.*

## *COVENTRY CATHEDRAL COMPETITION*

### *WINNING DESIGN : BASIL SPENCE, OBE, FRIBA, FRIAS, ARCHITECT*






WINNING DESIGN : *Section H-H.*

## *CHRISTIAN SERVICE CENTRE*

This group embraces the warden's house, the caretaker's house, and the Christian Service Centre itself. It groups happily with No. 11 Priory-row, which is a beautiful building, and which is to be restored and brought into the cathedral plan. The car park is convenient, and an intimate foot approach can be made through Hill Top.

*The Meeting-room* occupies a central position on the plan, and overlooks a garden and a pool through a veranda which faces due south. There is a small entrance hall with a staircase feeding the cloakroom at half basement level; the upper floors are occupied by a social room and two other rooms. The reading-room is placed on the end of the circulation, with a southern balcony for those wishing peace and quiet. Two administrative rooms are placed off the entrance hall.

## *HEATING AND LIGHTING*

It is proposed to use an accelerated low-pressure hot water system with floor coils set in the floor slab. These will be divided into approximately five separate sections for control purposes. It has been decided to use the building fabric, and particularly the heavy slab floor, for thermal storage, thus eliminating the expense of and the space required for thermal storage tanks, etc.

Present costs indicate that gas-fired boilers will be the most economical, and especially so if cheap off-peak rates now under discussion become available. The lower ground floor and the Christian Service Centres are heated by low pressure radiators off the same system.

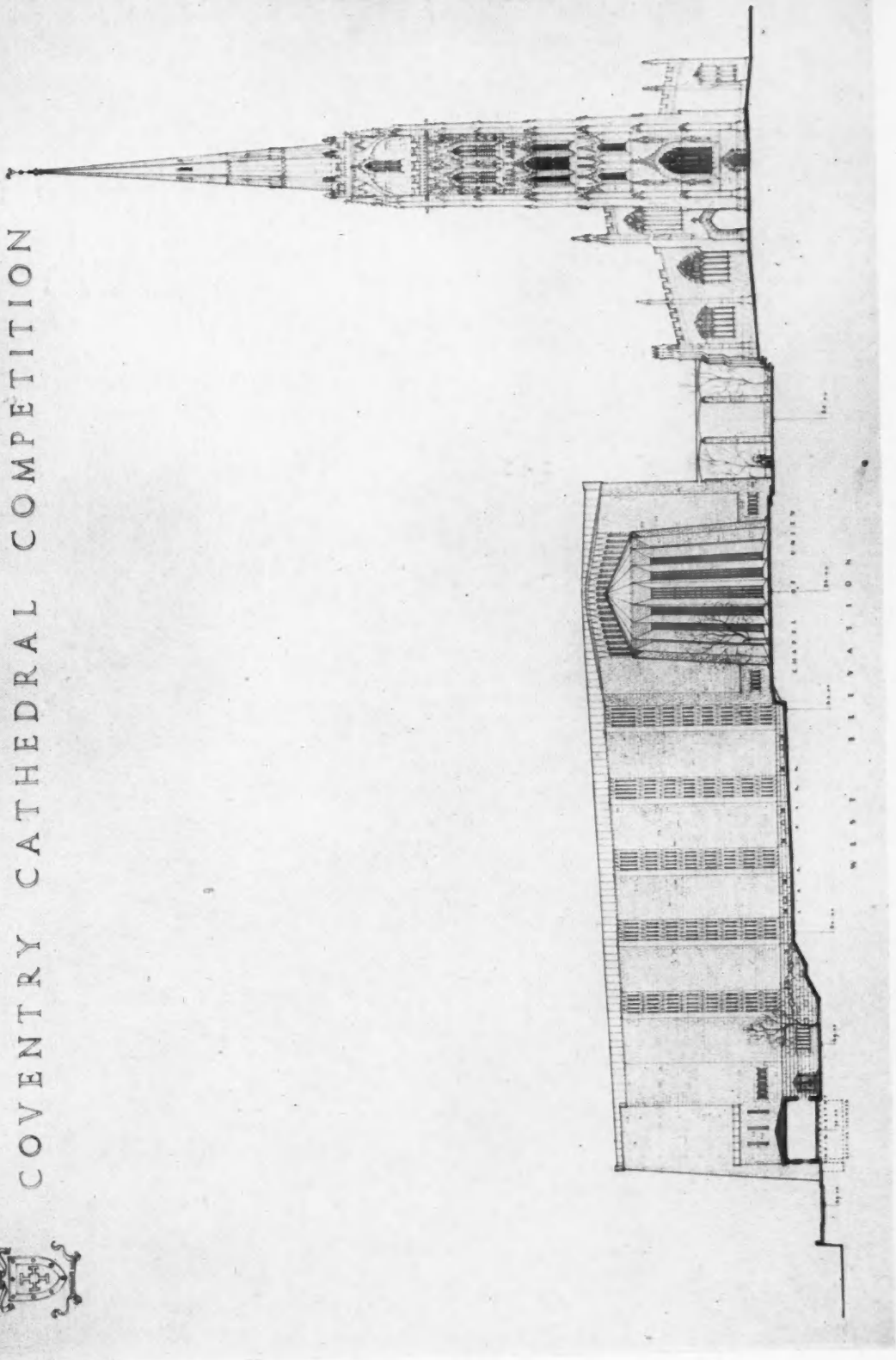
Straightforward tungsten lighting is suggested. The type of fitting is indicated on the half-inch detail—the only departure from this method is the illumination of the tapestry, which should be discreetly floodlit.

## *ESTIMATE OF COST*

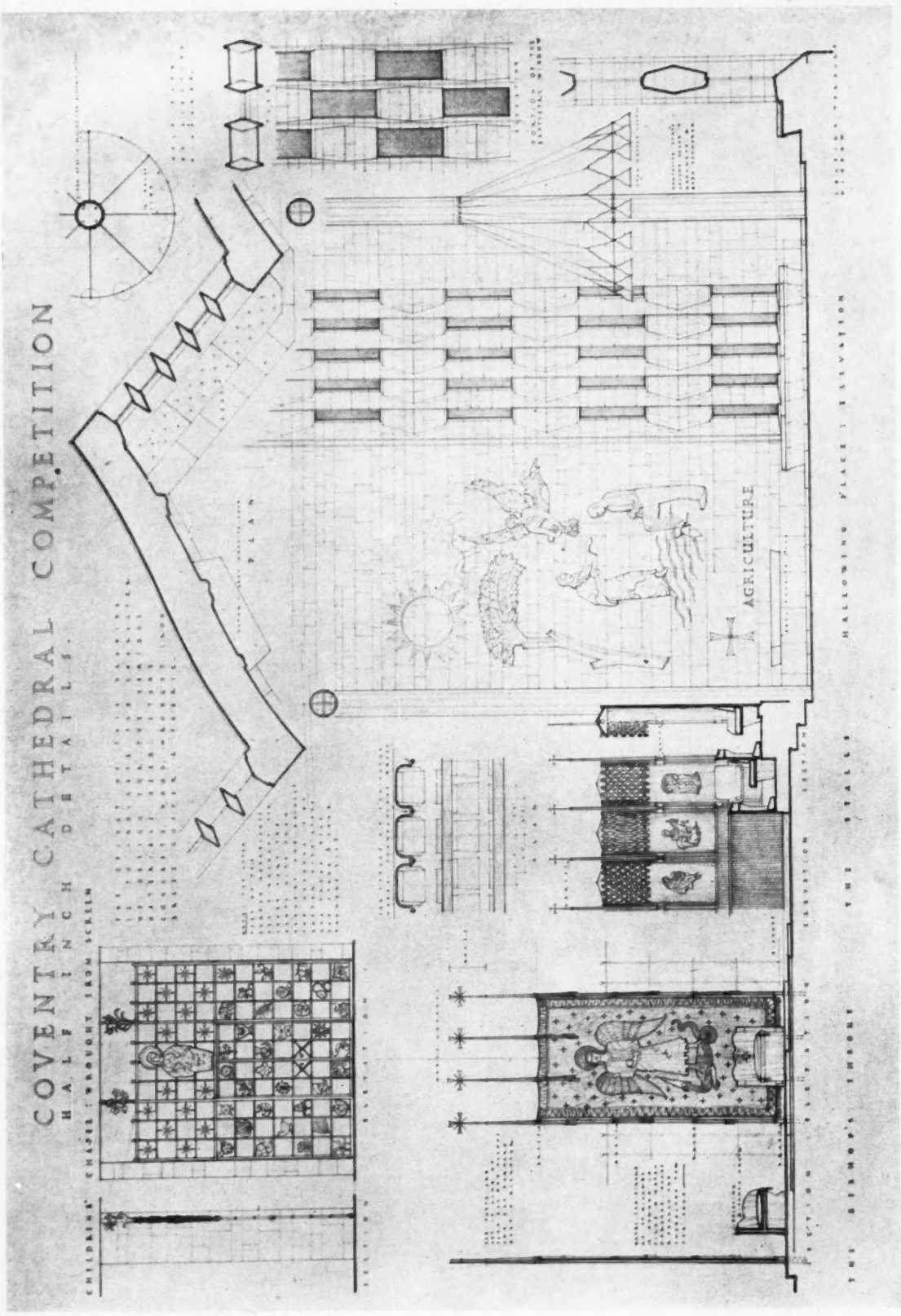
In order to arrive at a cube, quantities were taken out and priced at the rates current as at October 30, 1950. In a building such as this, it is impossible to guess a cube, and the reinforced concrete vault, the stonework, floor slab and heating, the furnishing of the cathedral, and also its decoration, were all accounted for in arriving at a cube figure. The only part that has been cubed without quantities is the Christian Service Centre and the one-storey link with the cathedral. The sum of £30,000 is allowed for the great tapestry, and a contingency sum of £10,000 has also been provided for.

Cubing at 5s. 6d. for the main cathedral, and 5s. 4d. for the Christian Service Centre, the cost is estimated at £801,103 16s. 4d.; this excludes the cost of the organ and the cost of the layout. It does include, however, for the terrace, the paving in the porch, and the steps leading to the old cathedral, and the formation of the new walls which form part of the old cathedral.

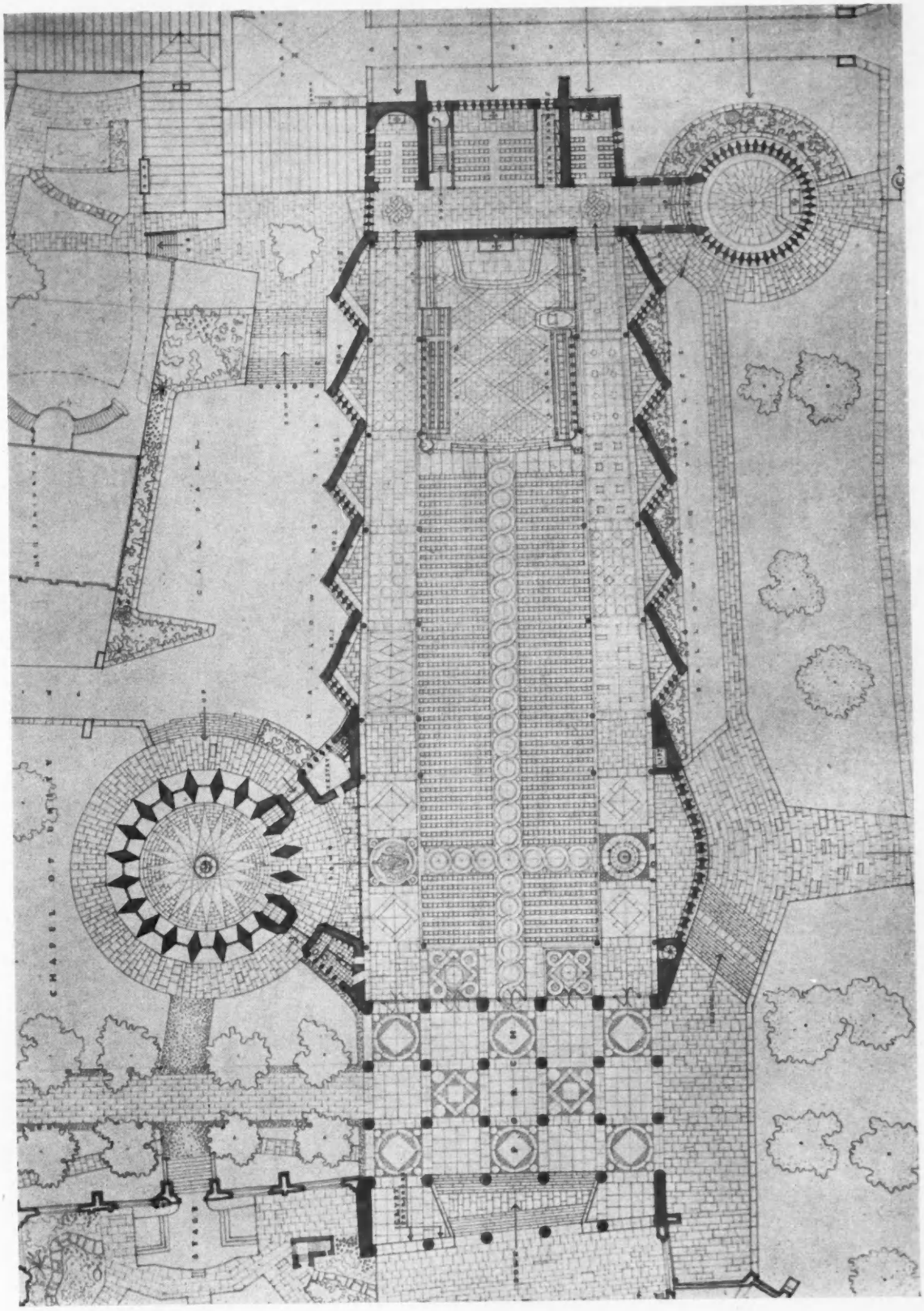
COVENTRY CATHEDRAL COMPETITION




*WINNING DESIGN : The west elevation.*

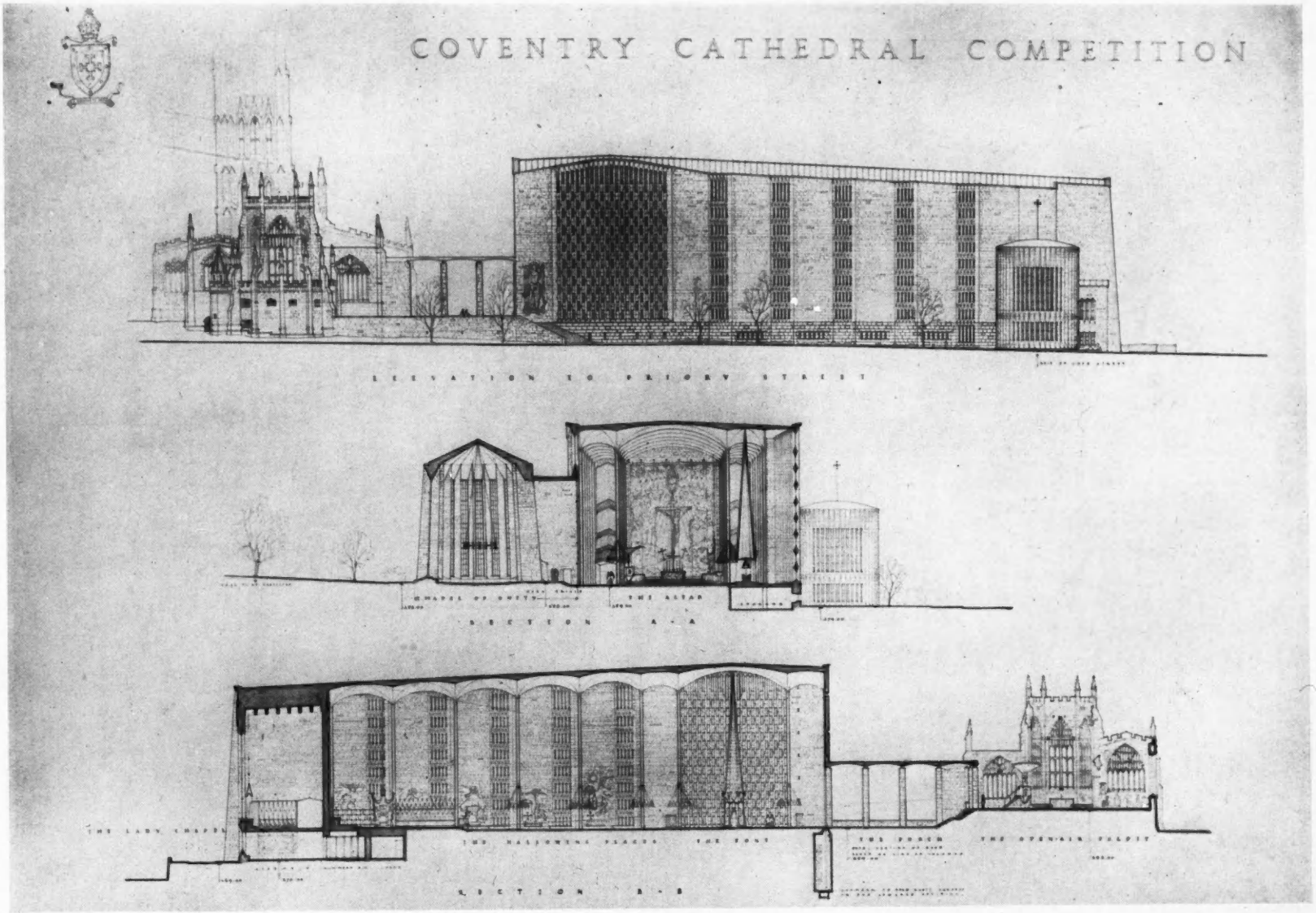



*WINNING DESIGN : Half-inch details.*

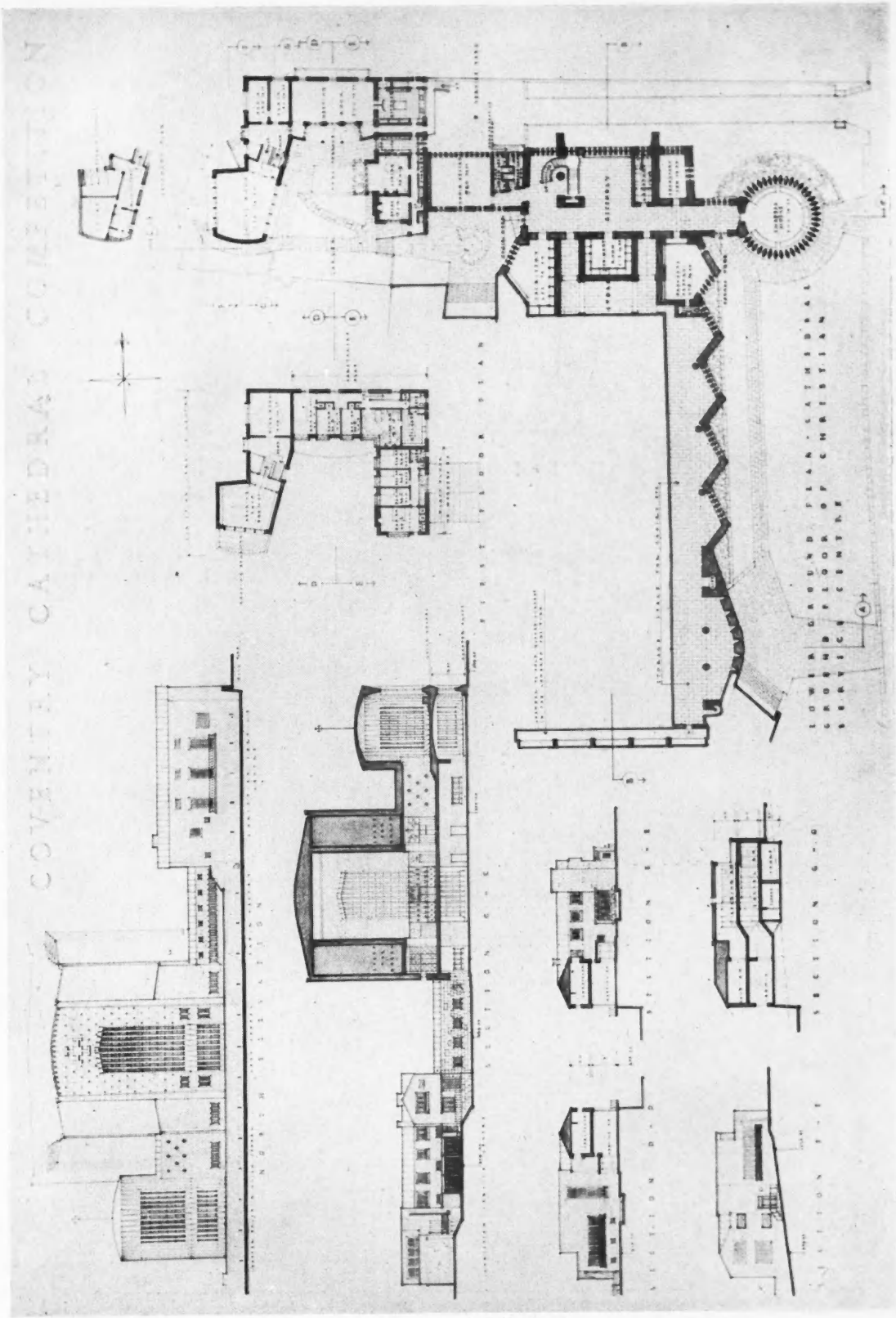



*WINNING DESIGN : The ground-floor plan of the cathedral.*

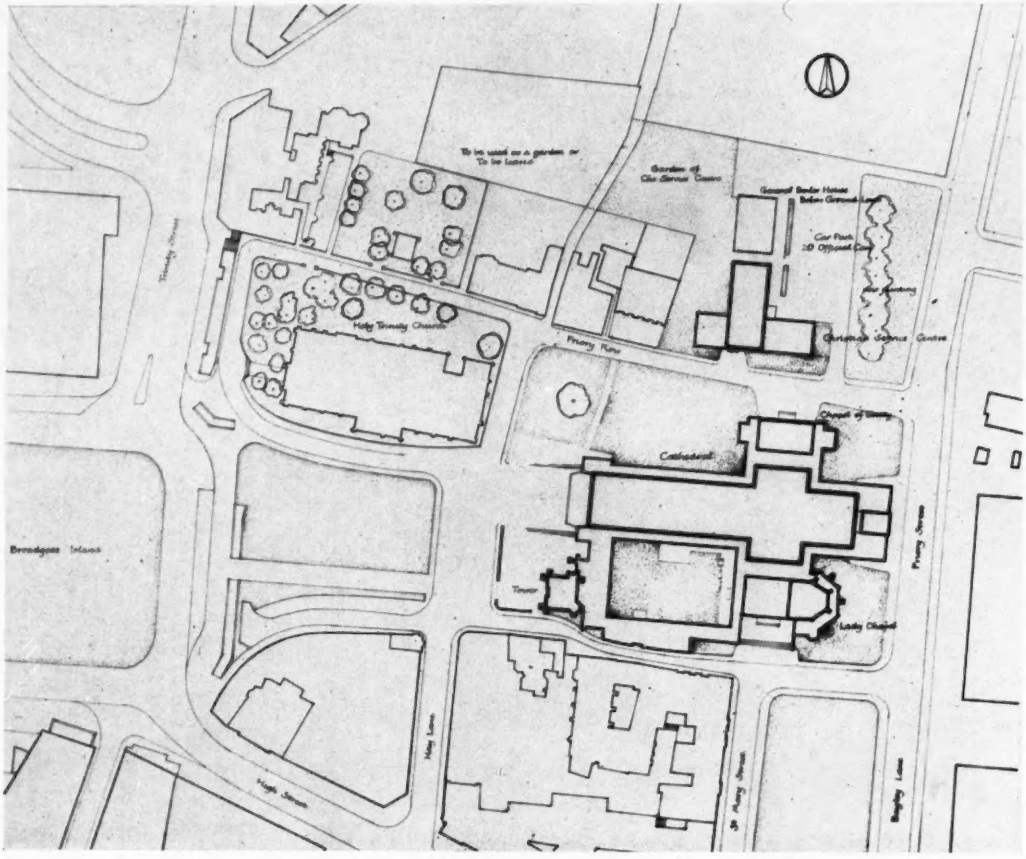
*WINNING DESIGN : Half-inch details.*




*WINNING DESIGN : Elevation to Priory-street. Section A–A and Section B–B.*




*WINNING DESIGN : North elevation, sections and lower ground plan of cathedral, and plans of Christian Service Centre.*

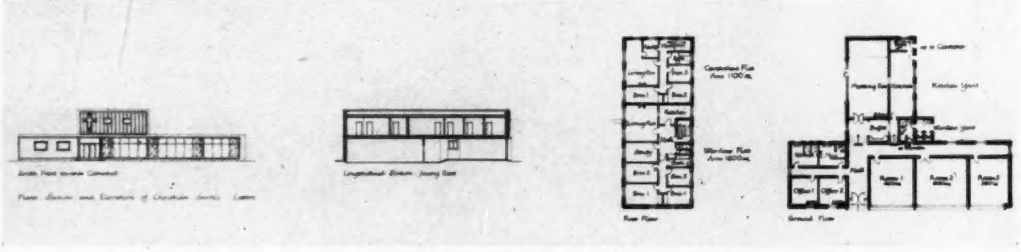



*Site plan.*

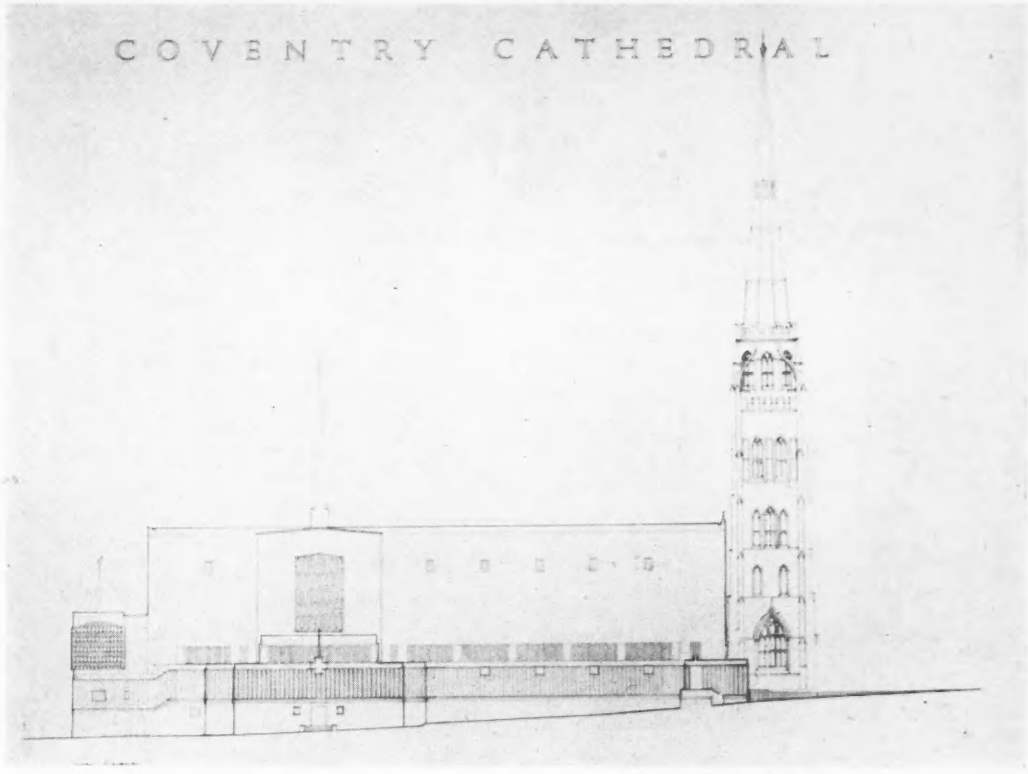
## *COVENTRY CATHEDRAL COMPETITION*

### *DESIGN PLACED SECOND*

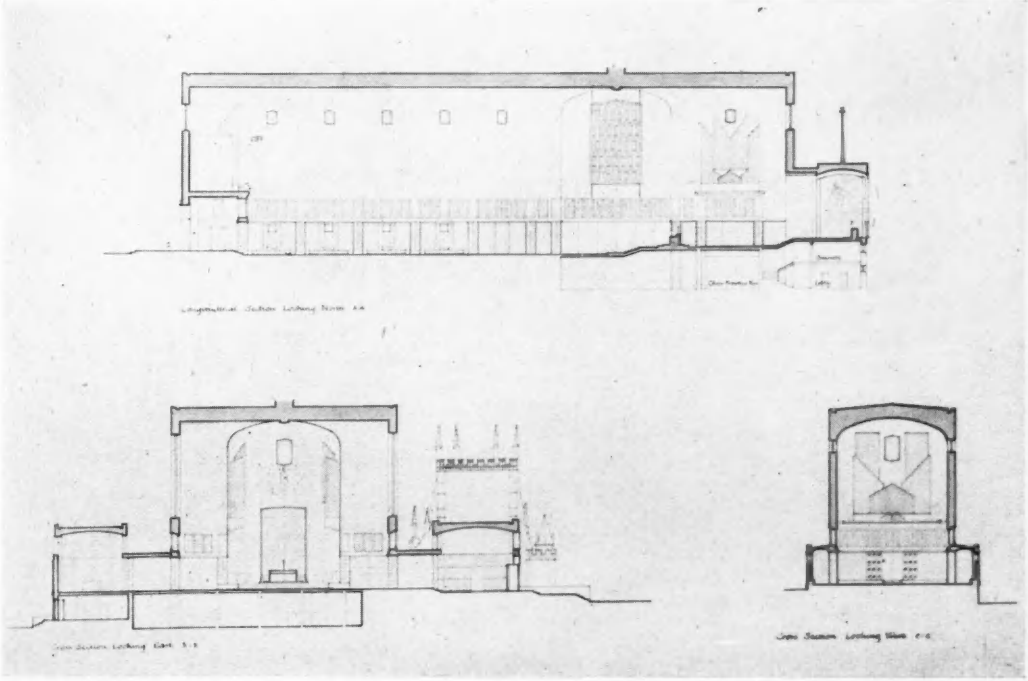
*By W. P. HUNT, MA, ARIBA, AMTPI*

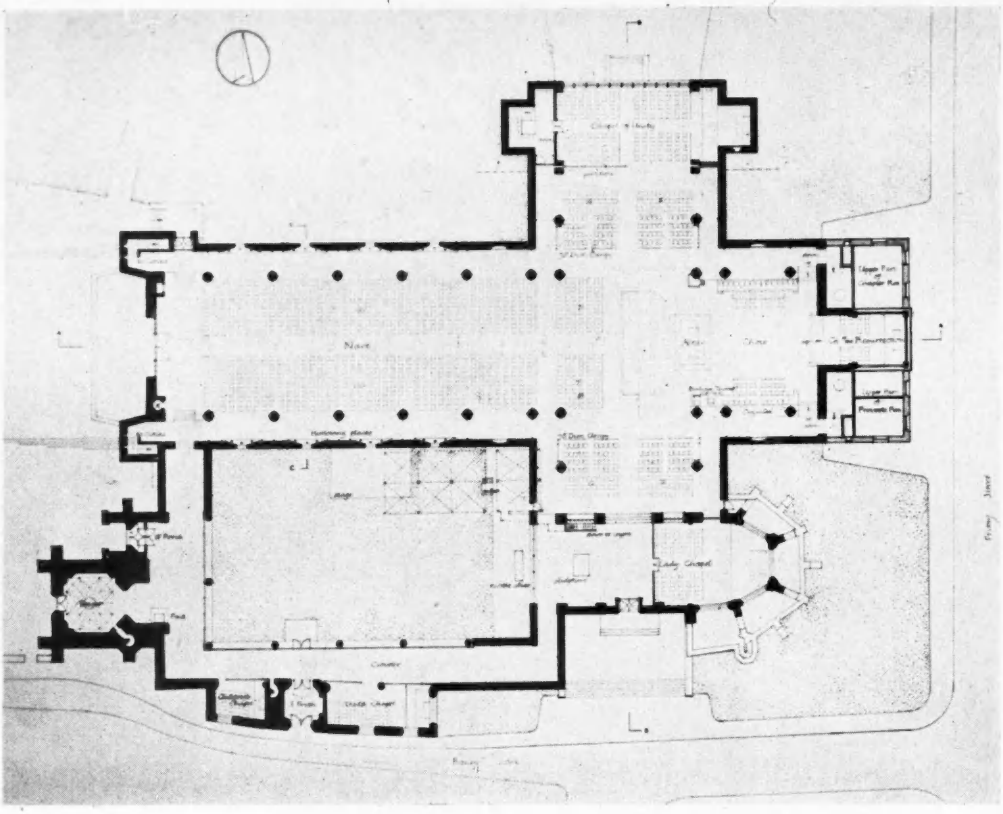


*The Christian Service Centre.*

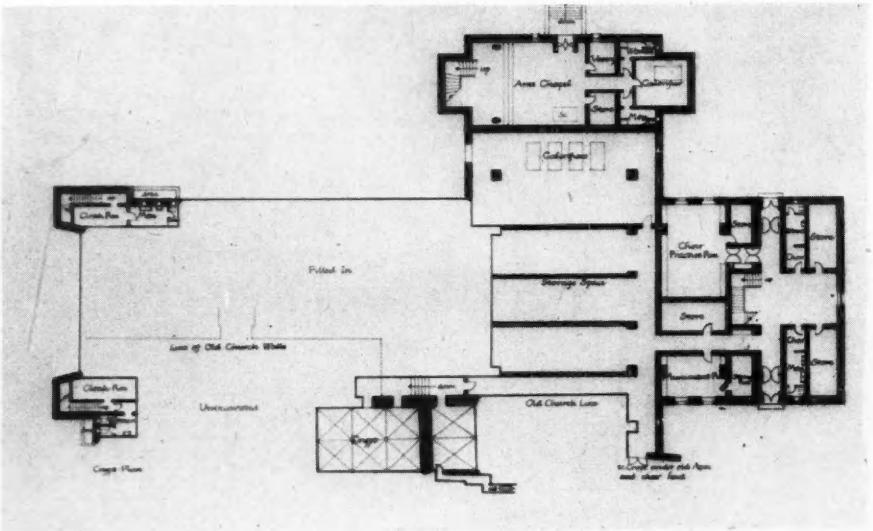


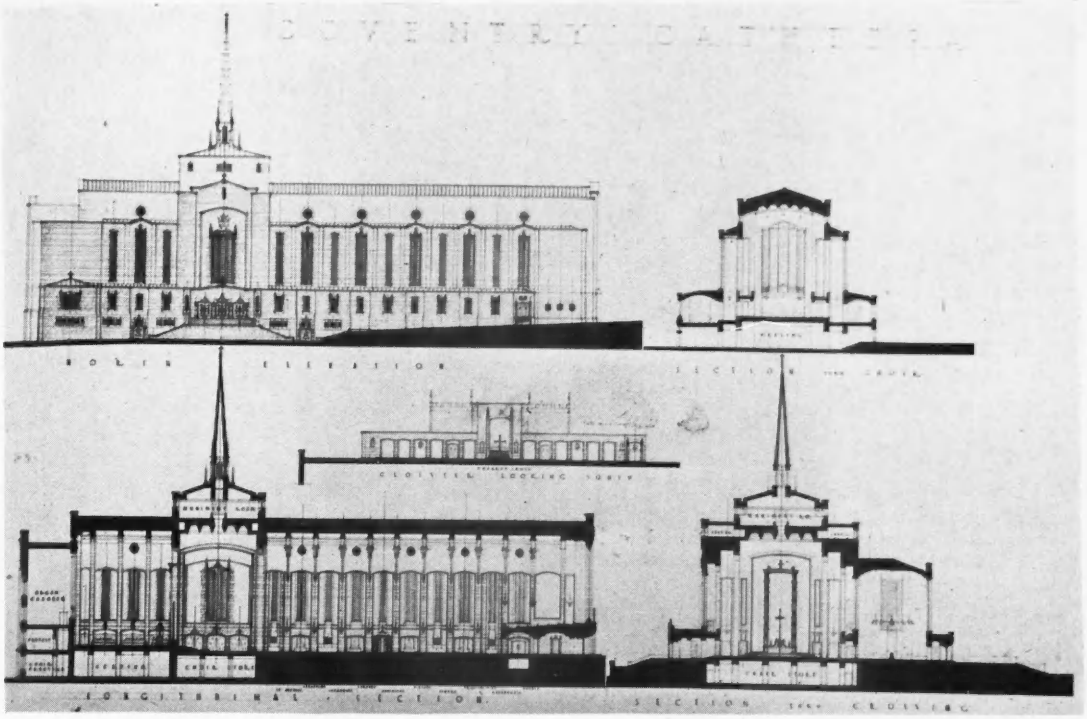

*DESIGN PLACED SECOND : North elevation and (below) sections.*





*DESIGN PLACED SECOND : Ground plan and (below) crypt plan.*

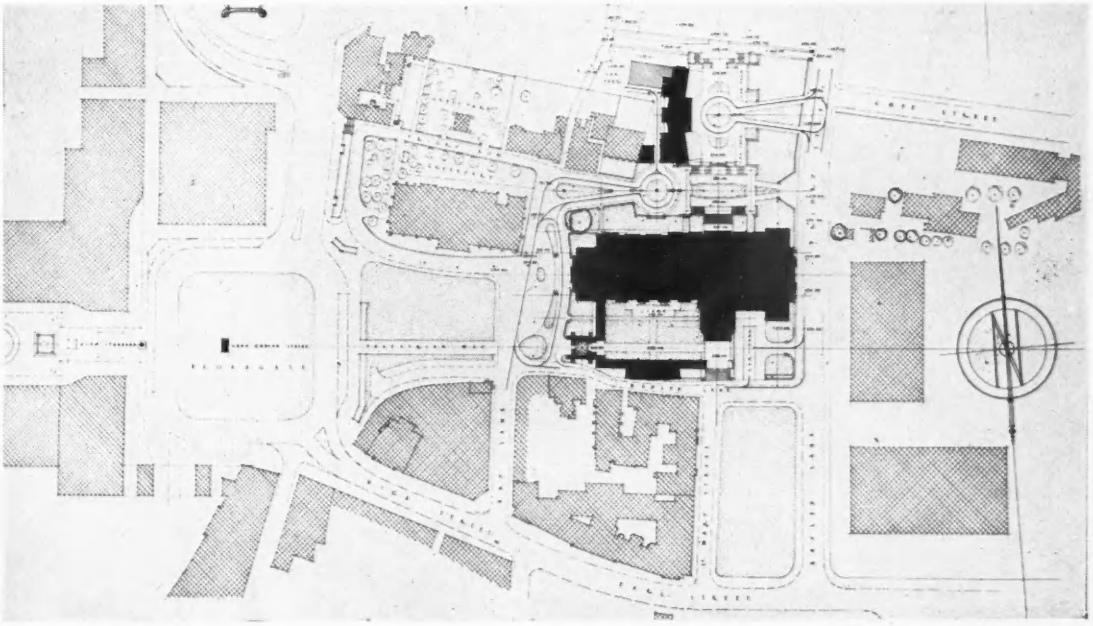


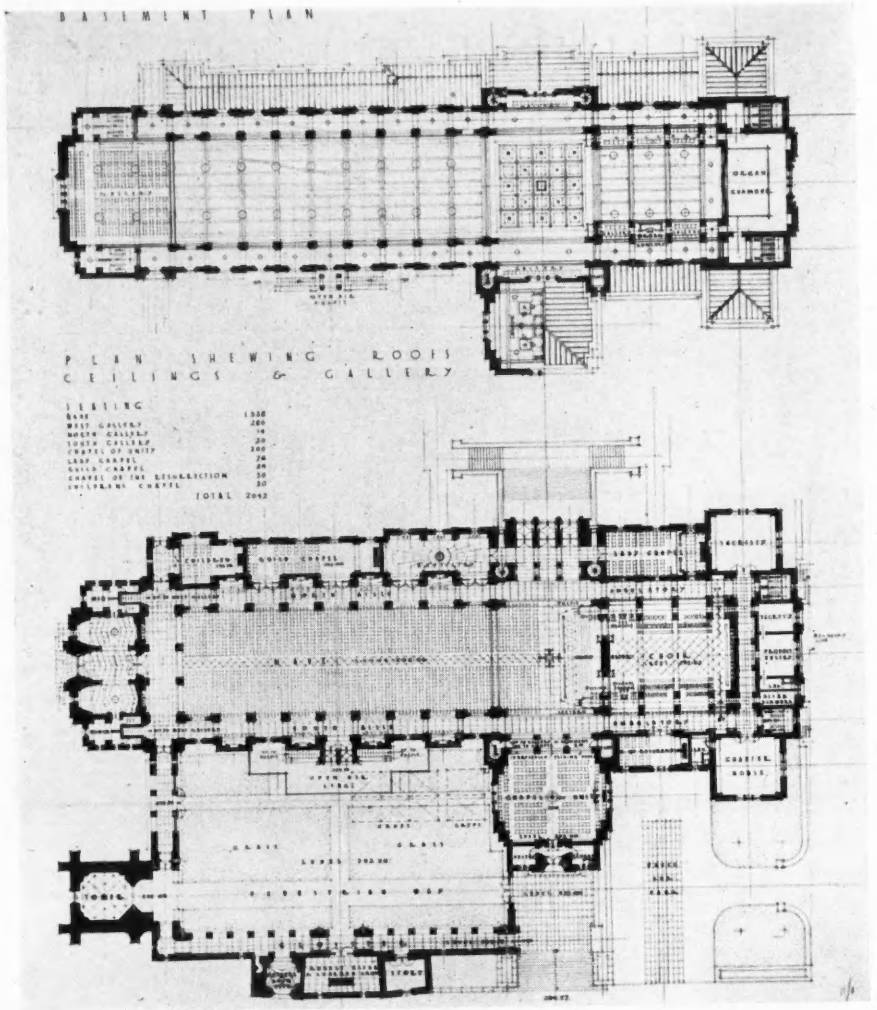


*North elevation and sections. Below : The site plan.*

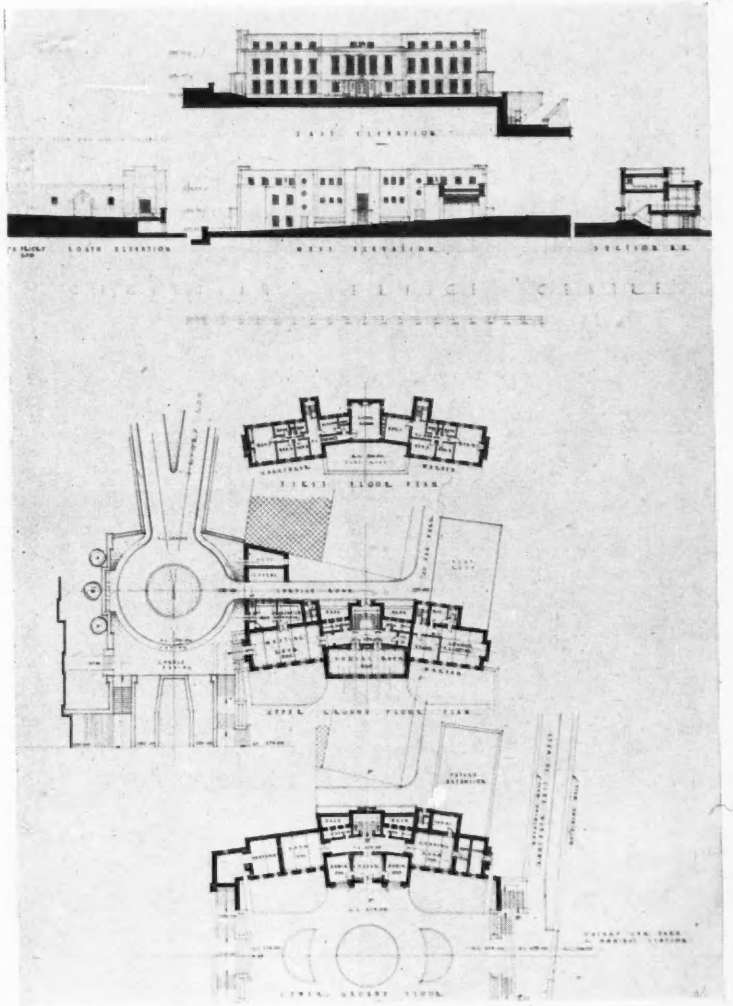
## *COVENTRY CATHEDRAL COMPETITION*

### *DESIGN PLACED THIRD : By A. D. KIRBY, ARIBA*



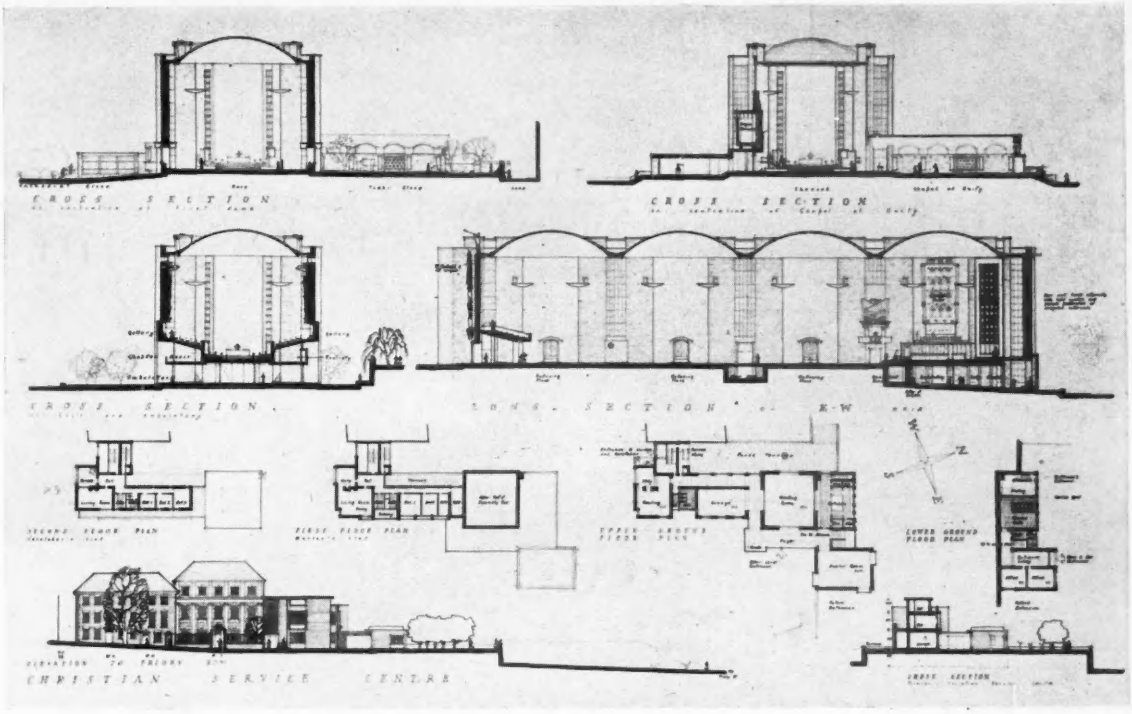



*Ground and gallery plans.*



*Plans and elevations of Christian Service Centre.*

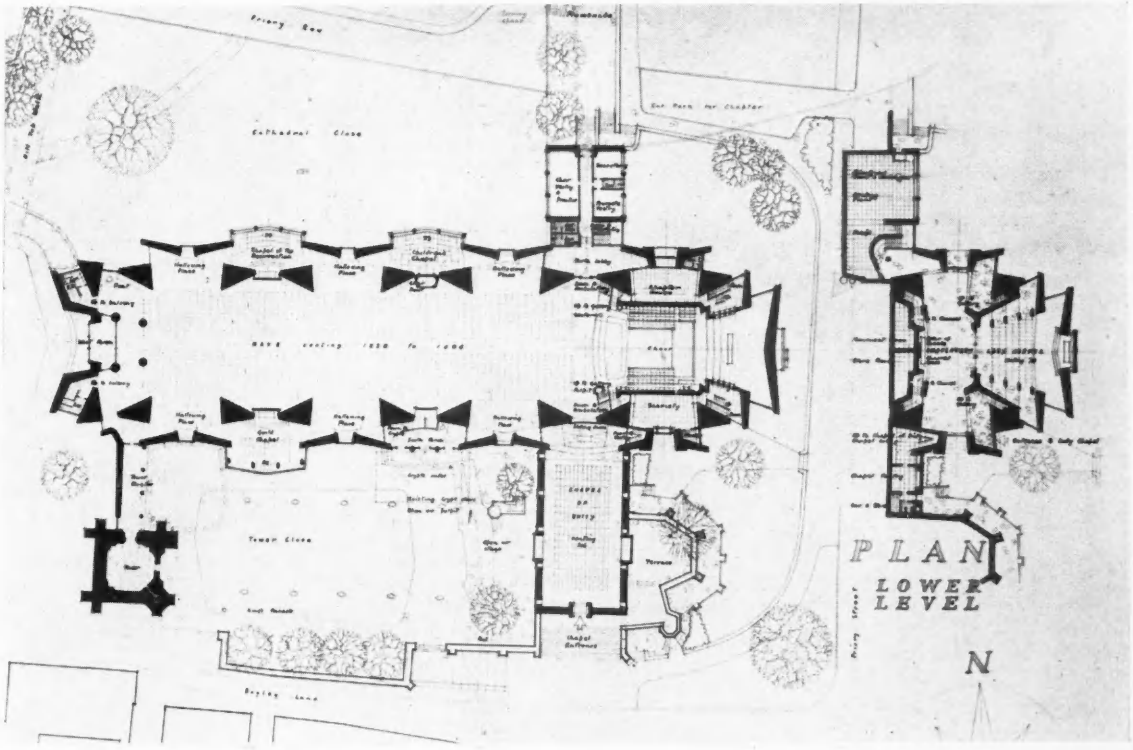
*DESIGN PLACED THIRD*

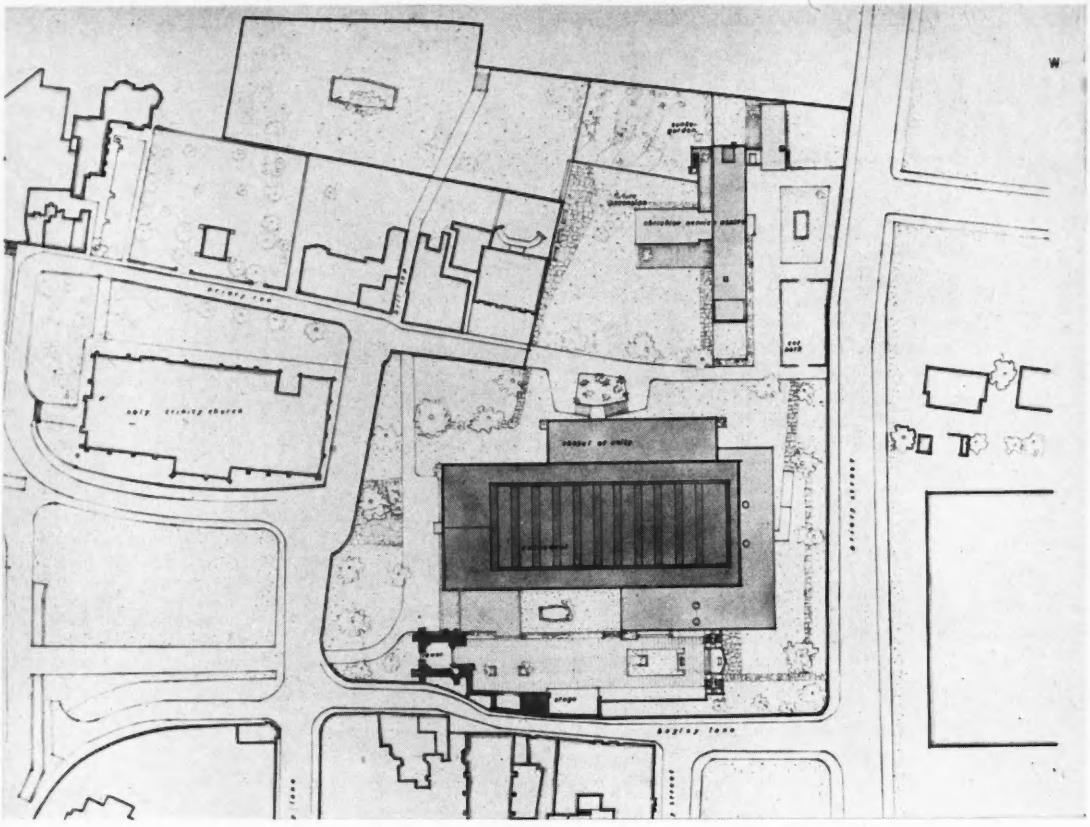



*Sections of cathedral and main elevations of Church Service Centre. Below: Plan of cathedral.*

## *COVENTRY CATHEDRAL COMPETITION*

### *DESIGN SPECIALLY MENTIONED : By ROLF HELLBERG, FRIBA*



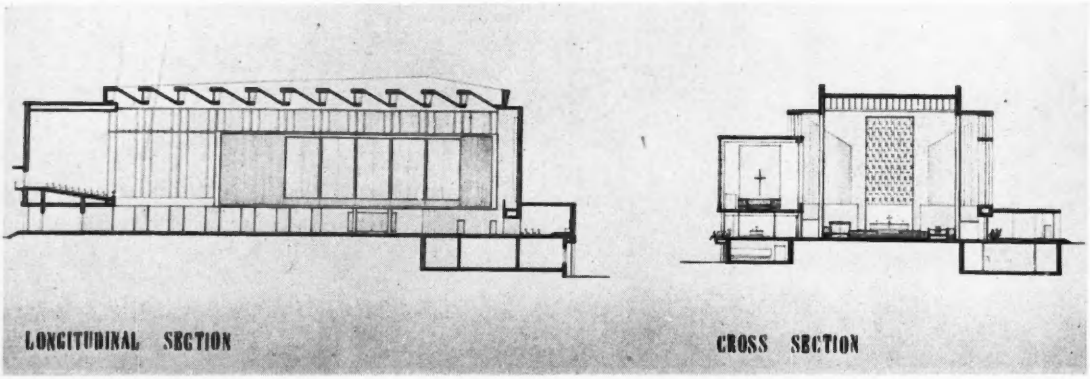


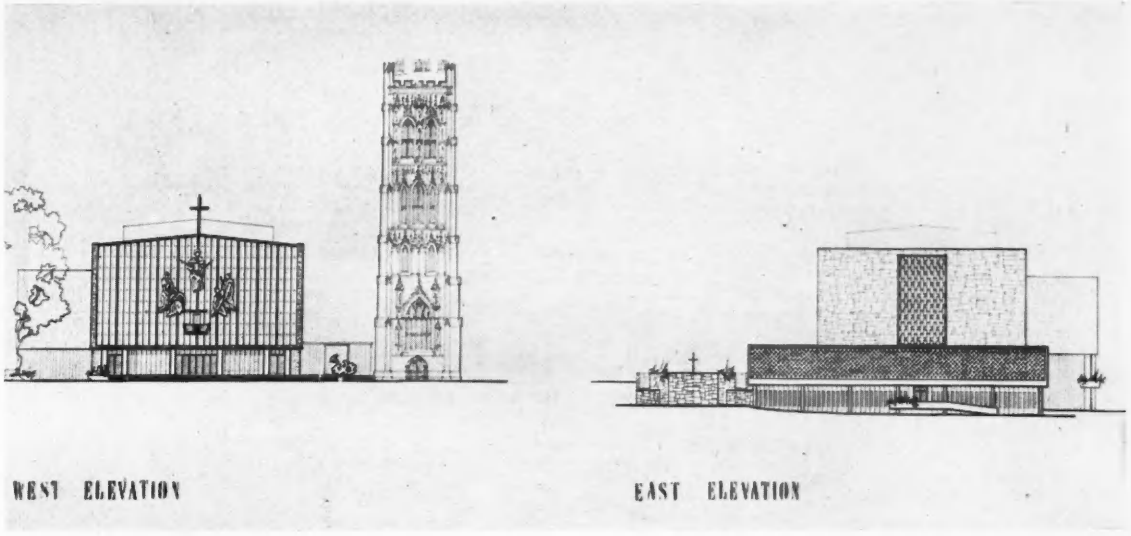
*The site plan. Below : Sections.*

# *COVENTRY CATHEDRAL COMPETITION*

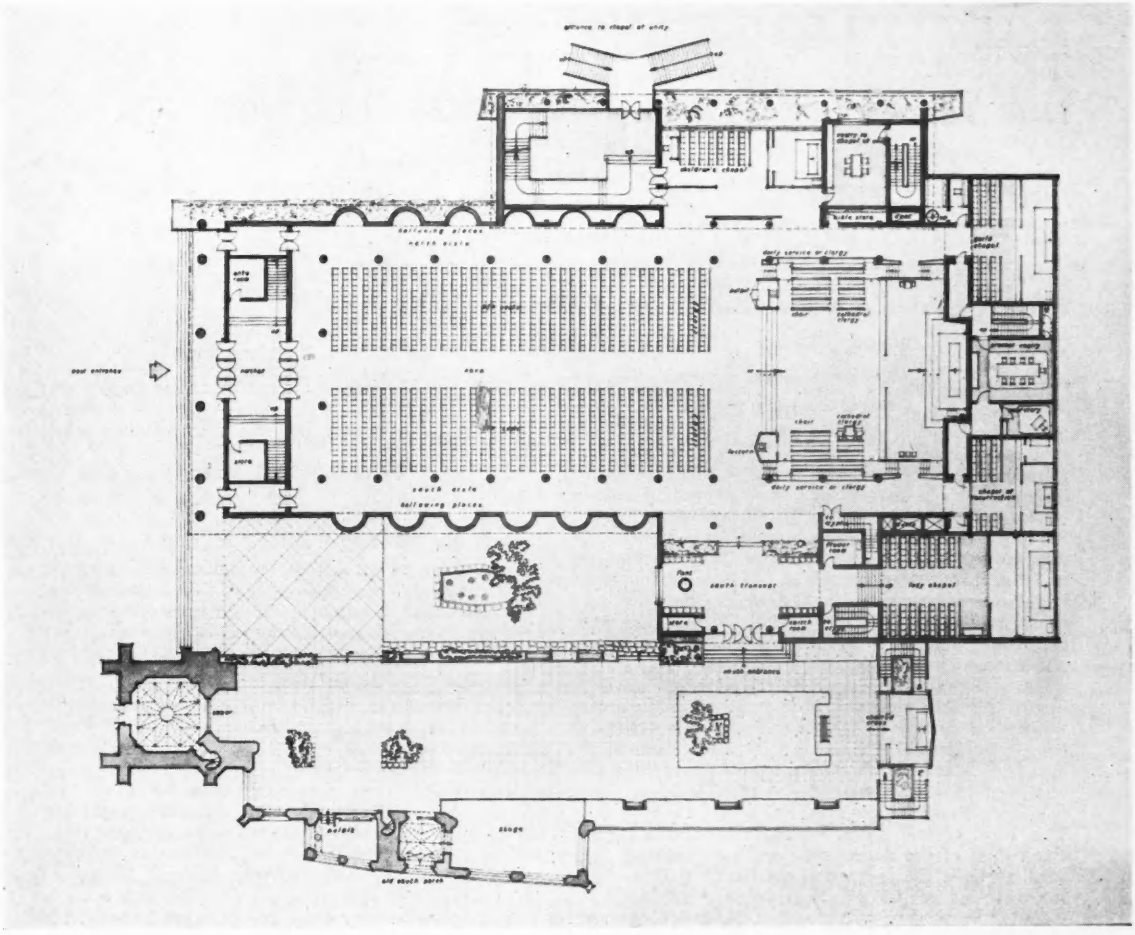
## *DESIGN SPECIALLY MENTIONED*

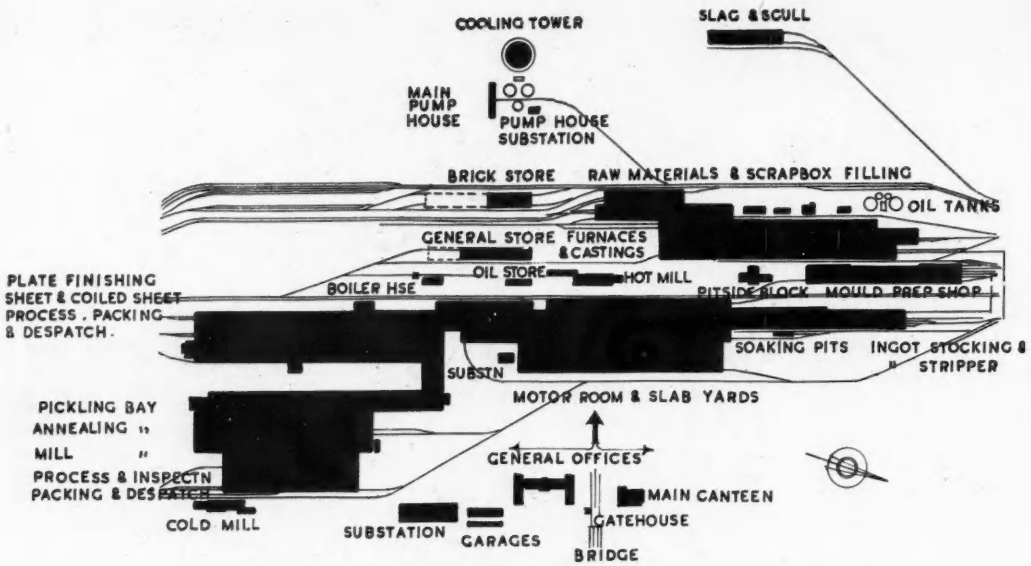
*By TISCHLER & HILDEBRAND, AARIBA*






*DESIGN SPECIALLY MENTIONED. Elevations and (below) ground plan of cathedral.*






*Key plan to Abbey Works.*

# *ABBEY WORKS PORT TALBOT*

## *FOR THE STEEL COMPANY OF WALES, LIMITED*

### *SIR PERCY THOMAS, PRIBA, AND SON, CONSULTING ARCHITECTS ON THE GENERAL DESIGN AND ARCHITECTS FOR ADMINISTRATIVE AND ANCILLARY BUILDINGS: W. S. ATKINS AND PARTNERS, CONSULTING ENGINEERS FOR WHOLE SCHEME*

THE Abbey Works at Port Talbot of the Steel Company of Wales, opened by the Chancellor of the Exchequer (Mr. Gaitskell) on July 17, is a remarkable building. Probably the longest structure in the world (it is upwards of three-quarters of a mile in length), the Abbey Works are the most up-to-date steelmaking plant in the world. In conjunction with the older Margam Works (which adjoin the new buildings to the north-west) the whole process of steelmaking, from the unloading of the ore and limestone at the deep-water quays to the stage when the steel sheet leaves at the southern end of the new buildings, the Abbey mills carry on the manufacture of steel in one continuous process.

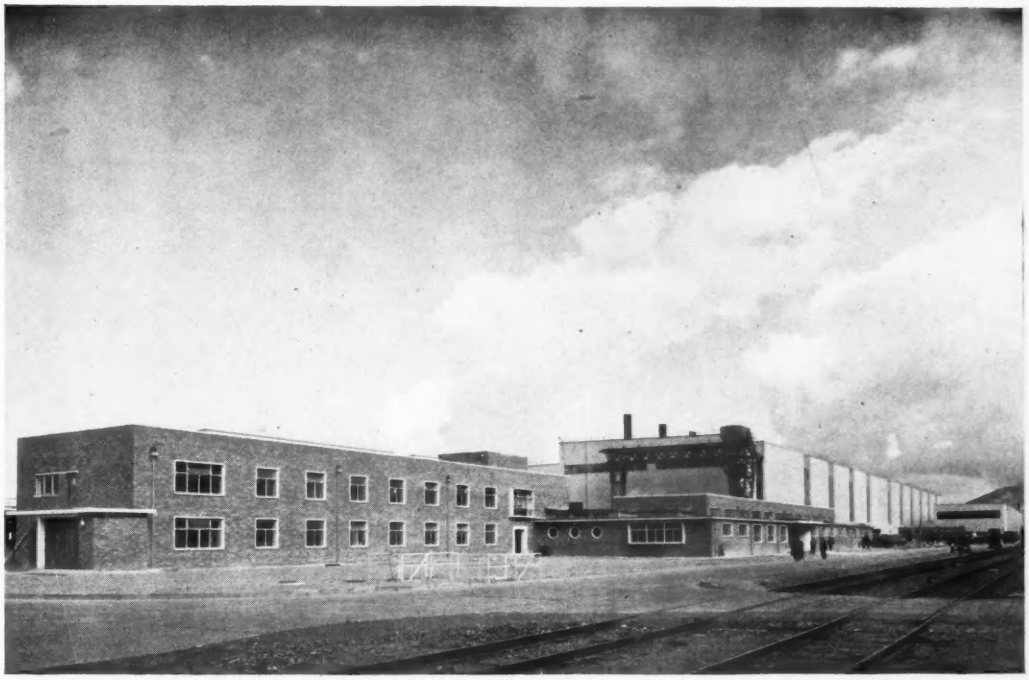
No small part of the success of this vast enterprise is due to the fact that it is probably the first time in this country that a firm of architects have been invited to co-operate from the beginning in every aspect of the design of a completely new steelmaking plant. The result of this collaboration between architects and engineers must be regarded as a complete success. The logic of the layout of the vast buildings; the clean lines of the main and ancillary structures; the thrilling (it is the only adequate word) quality of the internal roof treatment with its monitor roof lighting, its great vertical windows and the slim-looking steel trusses; and the intelligent use of colour everywhere apparent: these factors combine to provide a setting worthy of this, perhaps the greatest of Britain's heavy industries.

Sir Percy Thomas and Son were appointed consulting architects to the Steel Company of Wales at the inception of the project and as such their work fell broadly into two categories:

(*a*) As consultants on the general design of the buildings in conjunction with the International Construction Company and the consulting engineers, Messrs. W. S. Atkins and Partners.

(*b*) As architects in the normal sense for all administrative and ancillary buildings.

The former duty meant early consultation with clients on the general principles regarding the form of buildings and methods of lighting to be adopted, and once these principles were agreed the detailed design of the monitor roofs and great vertical windows was worked out in conjunction with the consulting engineers. Apart from the design of the main mill buildings, the architects were consulted on practically every æsthetical aspect of the scheme from colour schemes of buildings and plant down to the design of unit heaters. This involved a very close co-operation between the



*View of the casting bay from the south, with the hot mill amenities block in the foreground. This is the largest of the four main amenity buildings, consisting of hot mill office block and first-aid section, which is a two-storey brick building linked to the locker and messroom block by the staff dining-room and central service. The building provides accommodation for individual lockers, lavatories, showers, etc., for 850 men, with a messroom to seat 200. Each of these blocks is also provided with a time office and pay section, which is of standardised design throughout the works, and is linked to the locker room by a covered way.*

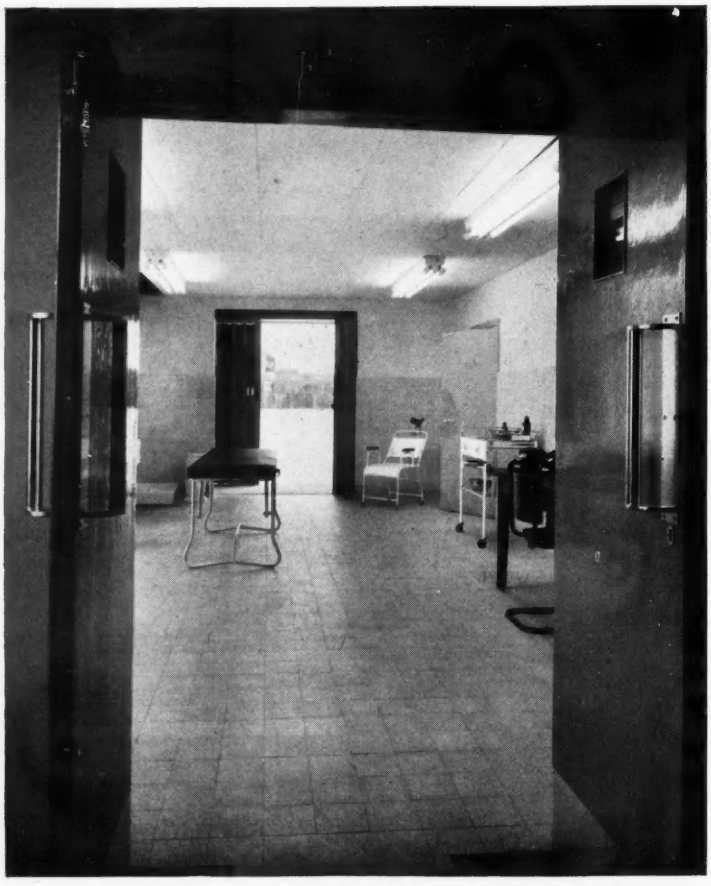
architects and engineers, which was soon established and maintained throughout the five-year period of the work.

The administrative and ancillary buildings necessitated a very large design and building programme concentrated into a relatively short period owing to the fact that many of these buildings could not be finally sited and planned until well on into the general programme. The programme consisted of eight relatively large brick buildings, together with a power station, a large boiler house and numerous substations, electrical and other specialised buildings.

Apart from the completed buildings now illustrated, there are now under construction the main adminis-

GROUND FLOOR PLAN OF HOT MILL BLOCK

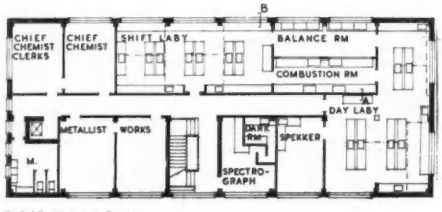
J



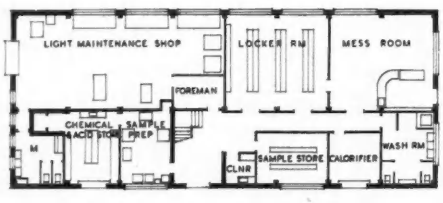
*Interior of first-aid room in hot mill block, taken from doorway of recovery room. This is a typical example of the four first-aid sections which are attached to each amenity block. Each is provided with an ambulance porch with double Bolton gate opening directly into the first-aid room. Floor and skirting tiles are Carter's Roman stone, with 5 ft. dado in eggshell finish.*

trative office, accommodating a staff of some 600, head office, and laboratories, and the main staff canteen (seating 700) with kitchen providing an additional 1,000 meals for distribution throughout the various works messrooms.

In the early stages of the job conferences were held between the architects, the co-ordinating engineers, the electrical consultants and the personnel and welfare branches of the Steel Company, as a result of which it was possible to draw up standards of accommodation and finishes for welfare and office buildings, and a standardised form of design for sub-stations and switchrooms. At the outset all multi-storey buildings and some of the large single-storey buildings

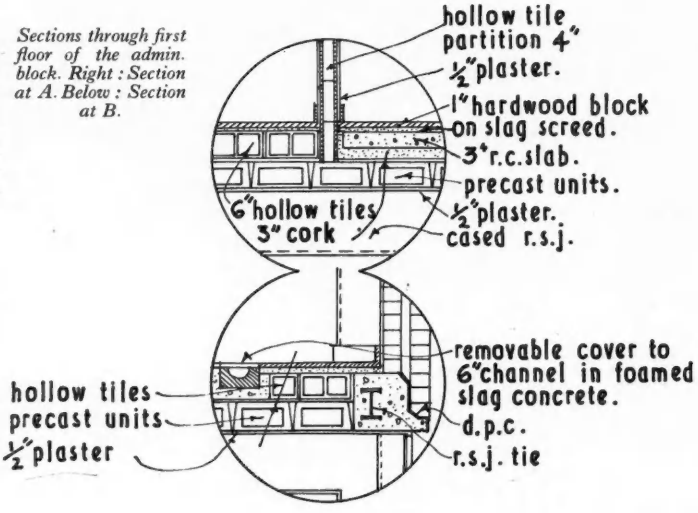



FIRST FLOOR PLAN.




GROUND FLOOR PLAN OF ADMINISTRATIVE BLOCK.

*Sections through first floor of the admin. block. Right : Section at A. Below : Section at B.*

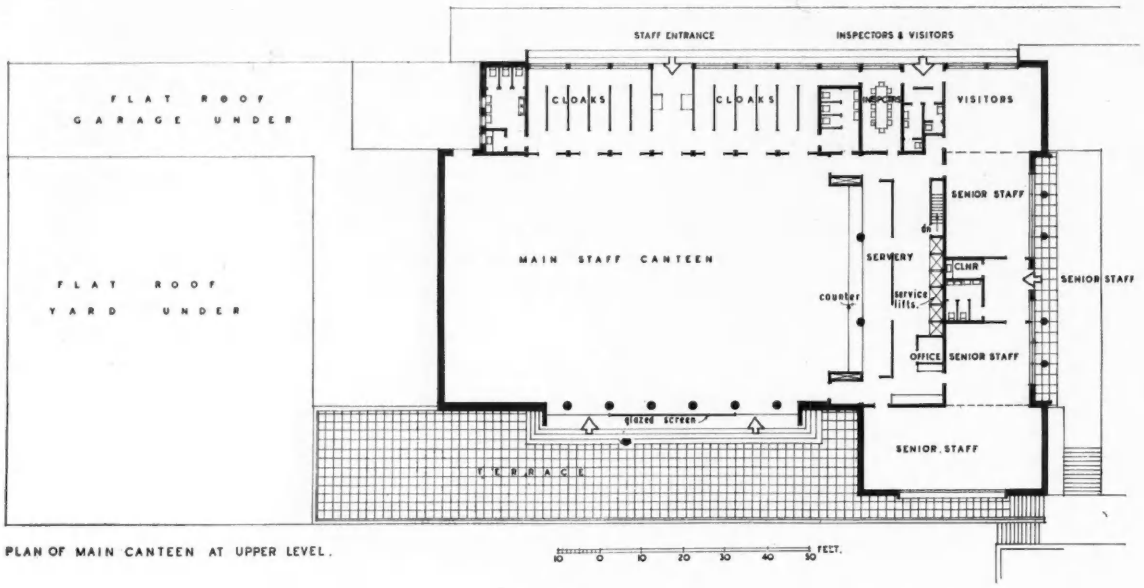


*Typical interior showing continuous crane rails, curved head of side glazing and low-level deck roof suspended from cantilevered purlins, which prevents the monitor glazing being damaged by the main lattice girders.*

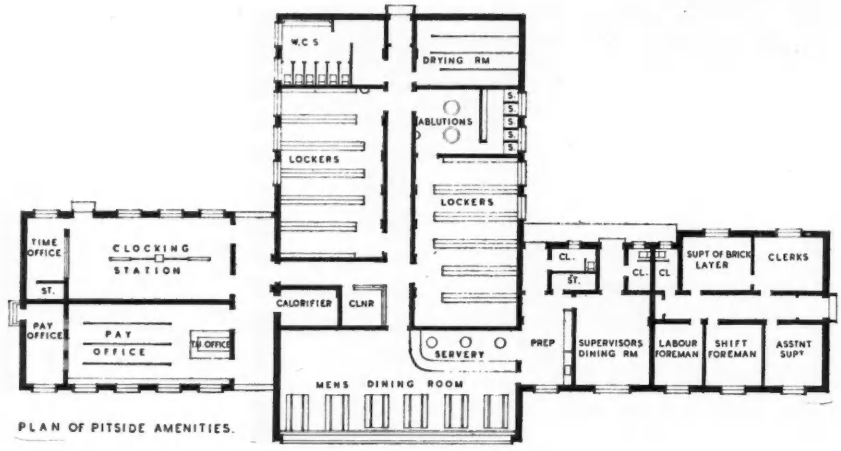
were designed with steel frames and 11-in. cavity panel brick walls. However, due to the necessity of speeding up the programme and in order to minimise the delay in foundations and steelwork, it was agreed to use load-bearing brick walls and, where practicable, prestressed precast roof units. The hot mill and cold mill office blocks are interesting examples of this type of construction where no structural steelwork whatsoever was used.

In addition to the Abbey Works the architects were also engaged in consultation with the Margam New Works Department in the modernisation of the existing Margam Works. This meant remodelling existing buildings and designing new ones on extremely difficult and congested sites, one example of which is illustrated (the masons' messroom, p. 264).

PLANNING OF AMENITY BUILDINGS: In view of the vast spread of the works it was decided in the early stages of planning that the welfare and amenity buildings should be grouped in economically sized units strategically sited throughout the works, which would give facilities to the personnel employed within




PLAN OF MAIN CANTEEN AT UPPER LEVEL.




PLAN OF PITSIDE AMENITIES.

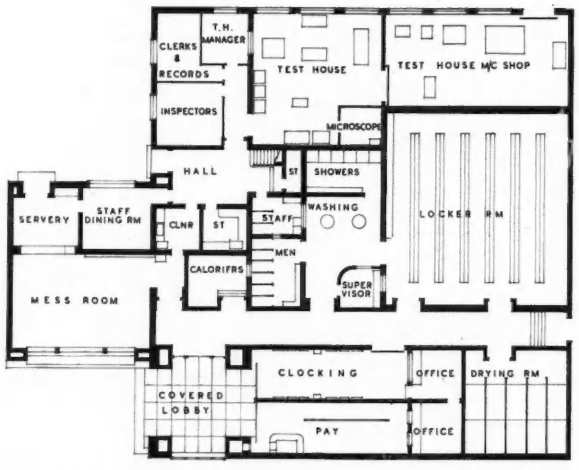
*PLANS OF ANCILLARY BUILDINGS (not illustrated by photographs).*

easy distance. In addition to the main amenity buildings, it was necessary to site a number of locker and messroom units immediately adjacent to specialised plant, blast furnaces, sub-stations, etc.

It was originally intended that the amenity buildings should be sited as appendages to the main mill, but when the details of accommodation were gone into it was found that there were no sites available adjoining the mill. All amenity buildings, with the exception of the plate and heavy gauge offices, were therefore built as detached units. After some consideration, it was decided that the works office blocks could also be sectionalised and office blocks were, therefore, planned with each amenity block. This arrangement involved the planning of five main blocks, each with totally different siting conditions, but, broadly speaking, containing the following standardised accommodation :

An office block providing accommodation for manager, engineer's staff, supervisors and clerical staff for the particular section of the mill ;

A first-aid section with dressing station, nurses' room, welfare officer's room ;




GROUND FLOOR OF OFFICE BLOCK.

*General view of cold mill amenities block, with packing and dispatch bays behind. The view is looking north-west.*

Staff and supervisors' dining-room to accommodate the office and supervisory staff ;

Operatives' dining-room to accommodate the men from the particular section of the mill. Wherever possible the two dining-rooms are sited with a central service for the distribution of precooked meals and the provision of tea, snacks, etc.

A locker room providing an individual locker for every man. Also shower baths, wash fountains, sanitary accommodation and drying rooms.

A standardised time and pay office is also attached to each unit.

It was decided that all amenity buildings would be constructed in brickwork with a reasonable standard of finish which would not be unduly costly but would stand up to the hard-working conditions that these buildings would receive. In order to economise in the use of steel and to speed up the programme, it was decided that the larger number of the amenity buildings, namely, cold mill amenities block, hot mill amenities block, plate and heavy gauge block and pitside amenities block would be constructed in load-bearing brickwork with prestressed precast concrete floors and roofs used wherever possible to effect the maximum economy in the use of rolled steel beams.

In siting the detached amenity blocks, it was necessary to provide entrances as near as possible to the main mill buildings, and to provide large open areas for use as " de-bussing " points and adequate garage and cycle accommodation near the operatives' entrance.

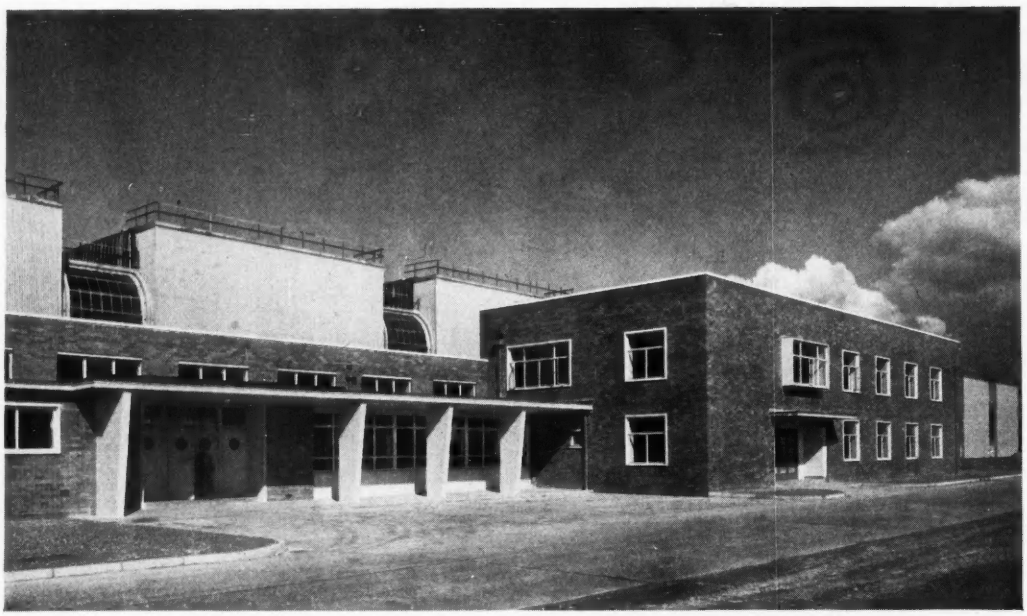
*Office Blocks :* Office blocks were generally planned on two floors with 15½-in. cavity brickwork outer walls, a central corridor with 9-in. load-carrying walls and offices of a depth of 15 ft. This arrangement enabled prestressed precast concrete units to be used and entirely cut out the necessity for structural steelwork. Each office block is provided with a separate entrance and lavatories, and is connected by a corridor to the staff and supervisors' dining-room.

*First-Aid Blocks :* The accommodation in the first-aid blocks was standardised to allow for a first-aid room some 25 ft. by 14 ft. with a covered ambulance porch provided with double sliding doors, this room opening into a rest room which is also used as a nurse's office. The welfare officer for each particular section of the mill has his office in the ambulance group, which is also provided with lavatory accommodation for both sexes.

*Operatives' dining-rooms, locker rooms and sanitary accommodation :* This accommodation was grouped together as one unit with a supervisor's room glazed on both sides, allowing constant supervision over the dining-room and the locker room. Electrical switchgear, keyboard, etc., are all sited adjoining the supervisor's office. The operatives' dining-room is usually arranged with a central service which provides cafeteria service to both this room and the staff dining-room. The locker rooms are flanked on both sides by drying-room, shower baths, wash fountains and lavatories, and are provided with clerestorey lighting at high level. The high portion runs straight through the operatives' dining-room, giving monitor lighting as well as the low-level windows.

The locker rooms are provided with 12 in. by 12 in. by 72 in. pressed steel lockers (one to each man) and each man is provided with an individual key. Circular foot-operated wash fountains are provided in the lavatories with liquid soap containers. The floors to all the toilet accommodation are tiled and the w.c. partitions are in pressed metal.

*Time and Pay Office :* It was soon realised that it would be an impossible arrangement to have centralised clocking, and time clocks were, therefore, provided at each main section of the mill. After consultation with the accounts department, it was

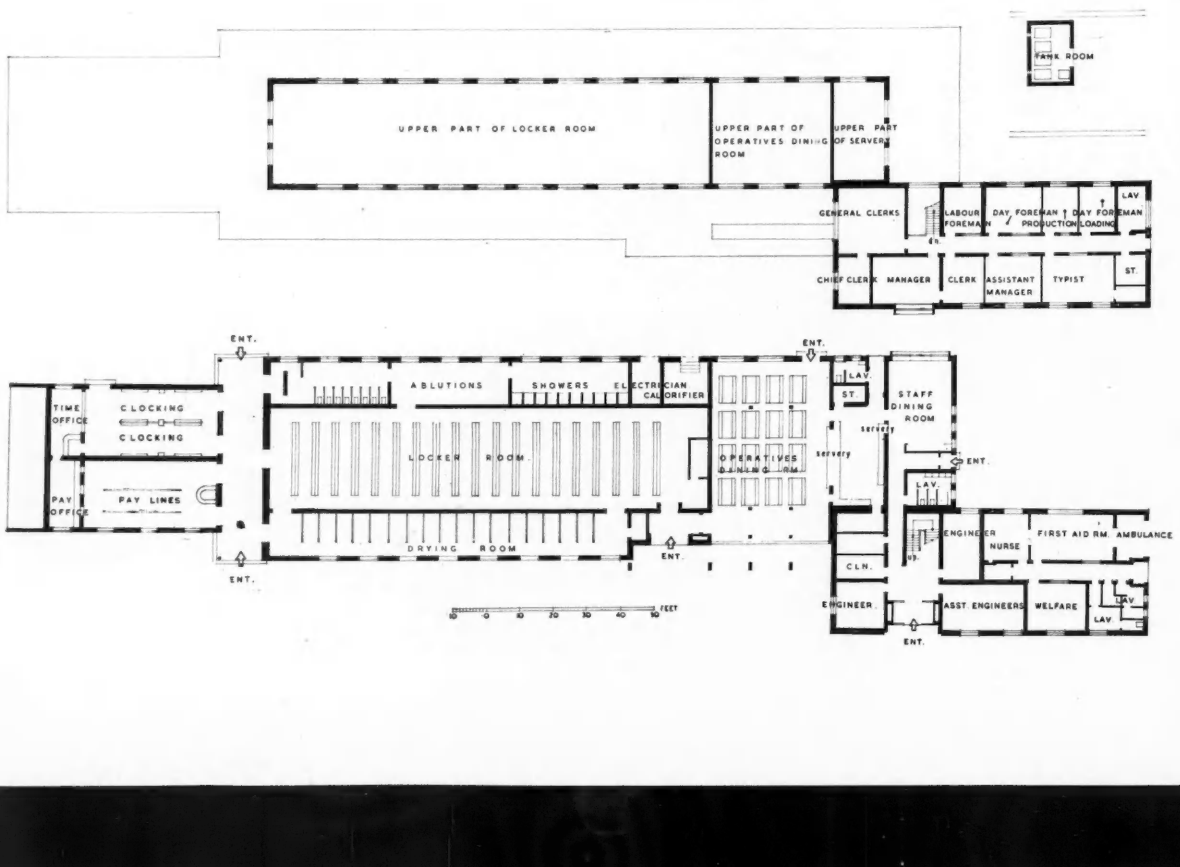


*Entrance to the cold mill amenities block from the east, with the packing and dispatch bay of the cold mill behind. This building, which faces on to the main railway line, is similar in layout to the hot mill amenities block, but with a somewhat smaller office block and messroom. The columns supporting the canopy over the entrance are faced with cream eggshell-finish tiles ; the door and window surrounds are finished with artificial Portland stone slabs. Below : plans.*

decided that the men would also be paid out in each section of the mill, and a standardised time and pay office unit was evolved, which was built as part of each amenity block.

The time unit consists of four time clocks with the necessary card racks connected to the locker room section by a covered way with a time-keeper's office raised above the general floor level, giving constant supervision over the clocks. Adjoining the time office is the pay unit, consisting of a pay office with grilled pay openings, queue rails and a desk provided at the exit for the use of trade union officials. These units are entered by means of double doors provided with Bolton gates which can be shut off at any time.

*Covered Car Parks :* Covered car parking arrangements are provided adjacent to each amenity block in



order to protect vehicles from the acid-laden atmosphere. The car park units consist of brick piers topped by cantilevered precast units carrying asbestos troughing fixed with a flat pitch. The piers are built at 18 ft. centres and the concrete floors are provided with Stelcon blocks for cycles.

The general contractors for the Abbey Works were: Messrs. George Wimpey and Co., Ltd., Messrs. John Laing and Sons, Ltd. (who carried out the Cold Reduction Mill), and Messrs. John Morgan (Builders), Ltd., Cardiff.

For the Margam Works extensions, the general contractors were Sir Robert McAlpine and Son, Ltd. (who acted as main contractors to the Steel Company for the reconstruction work and to the Railway Executive for the rail sidings and main line alterations), and Messrs. Andrew Scott and Son, Port Talbot.

*Abbey and Margam Works :* The following nominated sub-contractors carried out work at both the Abbey Works and the extensions at the Margam Works : Steelwork, Dorman Long, Dawnays, Ltd., and Connies and Meaden ; precast floors and roofs, Concrete, Ltd., and Fabricrete Products, Ltd. ; bricks, Ebbw Vale Brick Co., and Star Brick and Tile Co., Newport ; reconstructed stone, Penarth Concrete Co., Crosby Stone Co., Bridgend, and Gloucester Stone Co. ; steel windows and roof lights, Henry Hope and Sons, Ltd., Crittall Manufacturing Co., Williams and Williams, and John Williams and Son ; pressed metal, Henry Hope and Sons, Ltd.; insulating screeds and plasters, Dohm, Ltd., Vermiculite, Ltd., and MetaMica, Ltd. ; roofing, Ragusa Asphalte, Wm. Briggs and Son, Ltd., and Pure Rock Asphalte Co.; plastering, Plasterers, Ltd. ; flush doors, Leaderflush, Ltd., and Saro Laminated Wood Products, Ltd.; joinery, A. Hurley and Sons; glazing, Welsh Glass Co.; decoration, Ian Williams, and Metallization, Ltd.; wood block flooring, Acme Flooring and Paving Co. (1904), Ltd., Horsley Smith and Co. Ltd., Stevens and Adams ; floor and wall tiling, Carter and Co., Ltd.; granolithic paving, Johnson Floor Co., Ltd., and Pure Rock Asphalte Co. ; terrazzo and marble, Diespeker and Co., Ltd., Marble Mosaic Co., Ltd. and Pure Rock Asphalte Co. ; w.c. cubicles (steel), Henry Hope and Sons, Ltd.; sanitary fittings, Associated Clay Industries; drying room racks, James Gibbons, Ltd. ; ironmongery, James Gibbons, Ltd. ; suspended ceilings, Acousti-Celotex, Ltd., Horace W. Cullum and Co., John Bland, and Bowaters; metal balustrading, John Williams and Sons; dec. metal stair balustrades, Morris Singer Co., and Birmingham Guild ; glass domes, Pilkington Bros., Ltd. ; roof lights and glass cove, J. A. King and Co. Ltd. ; roller shutters, Haskins ; folding gates, Bolton Gate Co., Ltd. ; lifts, Waygood-Otis, and Express Lift Co. ; heating installation, J. C. Hitt and Sons, G. N. Haden and Sons, Ltd., and Carrier Ross ; electrical installation, Drake and Gorham Contractors, Ltd., J. W. and E., and Morris and Son ; laboratory furniture, T. Dryden ; catering equipment, G. F. E. Bartlett and Son, Ltd.; paints and distempers, I.C.I. Paints and Paripan, Ltd. ; vacuum systems, Lamson Tube Co. ; and steel doors, Dreadnought Fireproof Doors, Ltd.

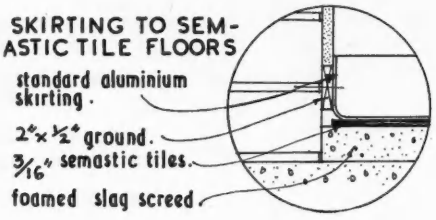
*Abbey Works :* The following were sub-contractors for the architectural buildings of the Abbey Works only : Plastering, W. Telling ; composition flooring, Korkoid Decorative Floors, Ltd ; sprayed ceilings, Turners' Asbestos Co. ; metal racking, John Williams and Sons (who also carried out metal balustrading) ; faience, Star Brick and Tile Co., and Carter and Co., Ltd. ; laboratory furniture, North of England School Furnishing Co. ; main entrance gates, Bayliss, Jones and Bayliss ; strong rooms, Chatwood Co., Ltd. ; metal partitions, Chatwood Safe and Engineer-Co., Ltd., and Roneo, Ltd. ; Portland stone work, E. Turner and Sons, Ltd. ; fire extinguisher systems, Pyrene Co., Ltd. ; sewage plant, Adams Hydraulics ; paints and distempers, Walpamur Co., Ltd.; and roof lights and glass cove, Lenscrete, Ltd., and Verlith Construction, Ltd.

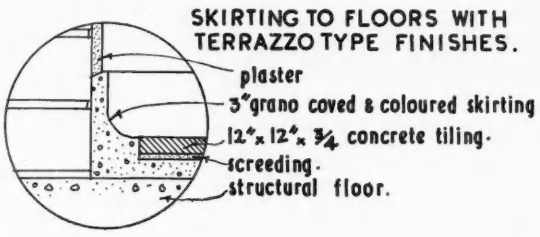
*Margam Works :* The following were sub-contractors for the architectural buildings of the Margam Works extensions only : Precast floors, roofs and hollow tile floors, Penarth Concrete Co. ; bricks, Tondu Brick Co.; pressed metal, Bernard Hastie and Williams and Williams, Ltd. ; flush doors, Southerns, Ltd. ; joinery, J. Nicholas and Percy Simmons ; grano. paving Jaconello, Ltd. ; composition flooring, Semtex, Semastic and Accotile ; steel w.c. cubicles, Williams and Williams, Ltd ; metal balustrading Bernard Hastie ; roller shutters, Picketts ; electrical, W. J. Furse ; and paints and distempers, Mitretex.

*First-floor corridor of cold mill office block. Floors are teak block with hardwood skirtings, suspended ceilings in 24 in. Tentest squares. Walls and ceilings painted broken-white and doors, etc., mushroom.*

*Below: Staircase detail in same block. There is an anodised aluminium handrail and wrought-iron balusters are painted maroon.*

*The cold mill manager's office is typical of the offices provided in the various works office blocks. The floors are European beech blocks, walls plastered and painted, and ceilings finished in Acousti-Celotex tiles. The radiators are pressed steel throughout. Note the specially designed finger-plates on all doors.*



*The masons' mess-room at the Margam Works is typical of the many smaller amenity buildings and extensions to existing buildings constructed on extremely congested sites as part of the modernisation programme of the existing works.*

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# NOTES & NEWS

## T.P.I. SUMMER SCHOOL

HELD under the auspices of the Town Planning Institute, the Town and Country Planning School will take place at Oxford from September 17 to 22. A varied programme has been arranged, and the papers to be read include "A Talk on Oxford," by Mr. T. Lawrence Dale, F.R.I.B.A.; "A Critical Analysis of the Working of the 1947 Act," by Mr. Henry W. Wells, F.R.I.C.S.; "Design Problems and Trends in the Planning of Towns," by Mr. Anthony Minoprio, M.A., B.Arch., F.R.I.B.A., A.M.T.P.I.; "Local Government at the Cross Roads," by Mr. C. Kent Wright, B.A. (Town Clerk, Stoke Newington), and "Public Influences on Planning," by Mr. F. J. Osborn, F.R.I.B.A., Hon. M.T.P.I.

Discussions play an important part in the programme. Special subjects on various aspects of town and country planning have been chosen for discussion, under the direction of discussion group leaders, and discussions will also follow the presentation of the various papers. The chairman for all sessions of the school will be its president, Sir George Pepler, C.B., P-P.T.P.I., F.R.I.C.S., Hon. A.R.I.B.A., Hon.M.I.Mun.E. The programme will conclude with a visit to Blenheim Palace on the afternoon of September 22.

## ONTARIO ARCHITECTS' DISPLAY

CANADIAN ARCHITECTS are fully alive to the need for spreading knowledge of new building developments among their members. With this end in view the Ontario Association of Architects are organising an exhibition of new building materials and techniques which is to be held at the Royal York Hotel, Toronto, on January 18 and 19 next.

The prime purpose of this exhibition is to display materials, equipment and techniques which are new in character or which may not be familiar to Ontario architects in general.

It is emphasised that this exhibition provides probably the only real opportunity in the year in this part of Canada for manufacturers to show, and for architects to inspect, new building materials and techniques, and their use and application in construction. To prevent the exhibition from being commonplace and monotonous, it is regarded as desirable that each exhibit should display something of maximum interest to architects.

Applications from firms in the United Kingdom will be welcomed. Those interested should apply to Mr. Peter Cleveland, A.R.I.B.A., 1, Hanover-square, W.1, not later than October 1.

## R.S.A. BURSARIES

THE ROYAL SOCIETY OF ARTS have decided to continue this year the offer of commercial art bursaries, to be selected by competition, to young British designers who are engaged in, or intend to enter, branches of industry in which design is of primary importance. The purpose of the bursaries is to provide the winners with opportunities to broaden their knowledge by travel abroad and the study of foreign design or, in certain cases, to obtain training in this country at an approved college, institution or industrial establishment. Bursaries offered amount to £2,100 compared with last year's figure of £1,705. Full particulars are obtainable from the Secretary, Royal Society of Arts, 8, John Adam-street, W.C.2.

## SWISS AIR RAID SHELTER POLICY

BUILDERS in Switzerland are now compelled by law to provide permanent air raid shelters in all houses now being built in areas with over 1,000 inhabitants. This is part of the Civil Air Defence measures which have now been reintroduced, for the Swiss believe that by fortifying the Alps and training the civil population they will be able to maintain their independence and neutrality whatever may happen.

The new legislation making compulsory the provision of permanent air raid shelters of a type which, it is believed, will give protection against atomic bombs, deals with the financial implications of the policy of obligatory shelters. To help builders meet the increased cost, a subsidy of 30 per cent. of the cost of construction of each shelter is provided, partly by the Government and partly from the funds of the Cantonal and local authorities.

## COVENTRY CATHEDRAL DESIGNS

THE WINNING DESIGNS and a selection of other entries in the Coventry Cathedral architectural competition will be on view at the Building Centre, 9, Conduit-street, London, W.1, from August 29 until September 8.

## FROM "THE BUILDER" OF 1851

*Saturday, August 23, 1851.*

NEW INFIRMARY AT DUNDEE.—Of 30 designs deposited in response to advertisement offering premium of £50 for that selected, several were submitted to Professors Christison and Syme, of Edinburgh, who previously furnished a block plan of the arrangements required, and three designs were marked out by them as best embodying their ideas. Time has been taken to consider the various designs, and the whole have been exhibited in the hall of the seminaries. The *Northern Warder* says, that in glancing over them he was "struck to find that the most enlarged charity cannot embrace above six designs at all worthy of criticism. The others are for the most part evidently the offspring of aspiring joiners, on whom the advertised premium has operated."

## COMING EVENTS

SATURDAY, AUGUST 25

CANTERBURY COLLEGE OF ART, SCHOOL OF ARCHITECTURE.—Exhibition of students' work, The Building Centre, 9 Conduit-street, W.1. Open until September 8 10 a.m. to 5 p.m. daily (Saturday 10 a.m to 1 p.m.).

WEDNESDAY, AUGUST 29

BUILDING CENTRE.—Opening of exhibition of the winning designs and a selection of other entries in the Coventry Cathedral architectural competition. 9, Conduit-street, W.1. Continuing until September 8. Daily 10 a.m.—5 p.m. Saturdays 10 a.m.—1 p.m.

RADIO INDUSTRY COUNCIL.—The Radio Show. Earl's Court, London, S.W.5. Continuing until September 8. Daily 11 a.m.—10 p.m.

THURSDAY, AUGUST 30

ENGINEERING, MARINE AND WELDING EXHIBITION.—Opening. Olympia, London, W. Daily from 10 a.m. to 8 p.m. Continuing until September 12.

# LONDON BUILDERS' CONFERENCE

## *R.I.B.A. Suggested Declaration to be Sought from Tenderers*

AT their meeting on July 3, 1951, the Council of the Royal Institute of British Architects considered a report of the Practice Committee on the activities of the London Builders' Conference, and it was resolved to reaffirm the strong disapproval expressed by the Council in 1939 of the methods of the Conference in regard to price-fixing arrangements. The Council deprecated particularly the procedure which has the effect of adding an amount to the contract price for which the building owner receives no visible or tangible return.

The Council have accordingly agreed to republish the following extract from the statement on this subject which was originally issued in the R.I.B.A. *Journal* for September, 1939, informing members:

(*a*) that they should advise their clients of the advantages of limiting invitations to tender to a reasonable number;

(*b*) that they should classify contractors according to standards of workmanship and general standing in the industry, and invite only those in the same class to tender for a job suitable to that particular class; and

(*c*) that the Council are unable to register approval of the operations of the London Builders' Conference.

The Council recommend that members should ask tenderers to sign the following form of declaration when invited to tender for all work other than jobs of comparatively small dimensions:

DECLARATION BY TENDERER

We declare that we are not parties to any scheme or arrangement under which:—

(*a*) we communicate the amount of our tender to any other person or body before the Contract is let;

(*b*) any other tenderer for the Works, the subject of our tender, is reimbursed any part of his tendering costs;

(*c*) our tender prices are adjusted by reference directly or indirectly to the prices of any other tenderer for the Works.

No provision is made in our tender price for any such reimbursement or adjustment or any contribution thereto.

Signed (as in tender) .....

for and on behalf of .....

.....

Date .....

## PROFESSIONAL ANNOUNCEMENTS

MESSRS. WARNETT KENNEDY AND ASSOCIATES, architects and design consultants, have opened an office at Waterloo-chambers, 19, Waterloo-street, Glasgow, C.2, in addition to their London office at 67, Upper Berkeley-street, W.1.

JAMES DE HOLDEN STONE, F.S.I.A. and WARNETT KENNEDY AND ASSOCIATES are now collaborating on the exhibition and display side of their practices.

MR. GRAHAM DOYLE, F.R.I.C.S., chartered quantity surveyor, has taken new premises at 8, Craven-road, Paddington, London, W.2. Tel.: Ambassador 1871.

MESSRS. CAMERON AND MIDDLETON, chartered quantity surveyors, have opened a branch at 21, Queen-street, Oldham, Lancashire.

# CORRESPONDENCE

## LONDON BUILDERS' CONFERENCE

To the Editor of *The Builder*

SIR,—I was delighted to read your leading article of July 27, on the subject of The London Builders' Conference, and was interested in the arguments put forward by Sir Alfred Hurst in his letter (your issue of August 17).

Sir Alfred argues that the spread of monopoly in recent years under private or State control justifies builders in attempting to fix prices instead of competing equally in a free market. The serious dangers to the general economy and well-being arising from monopolistic practices have been widely discussed and they are undoubtedly such that any extension of monopolistic practices should be most rigorously examined and only accepted if there is no practical or possible alternative. Further, to suggest that the efforts of certain sections of the sub-contracting side of the building industry to exert monopolistic control should justify the builders following this practice is not logical, and both aspects of this tendency should be equally condemned.

It is appreciated that the cost of tendering for work is a necessary overhead in any builder's business, and as such should be kept to the reasonable minimum compatable with efficient working. In this connection, architects and surveyors can and have been doing much to assist contractors by following the general lines of the recommendation of the R.I.B.A. and R.I.C.S. of 1939, which has just been re-affirmed by the Council of the R.I.B.A., and is similar in intent to the recommendations of the Simon Report.

It would be interesting to know whether the members of the Simon Committee ever visualised that an organisation such as the London Builders' Conference, which frankly sets out artificially to fix the price of building contracts, was representing a policy for improved efficiency which that committee advocated.

In his letter Sir Alfred admits that the facts with regard to the Conference, as set out in your leading article, are correct. If this be the case, it is difficult to understand why contractors should be submitting tenders for contracts well below the "fair price." It is noted also that the practice of averaging the lower two-thirds of the tenders, to obtain a "fair price," does not necessarily produce sufficient money to pay out to the contractors, and it appears at times that an amount of money is artificially added.

It is apparent (from Sir Alfred Hurst's letter) that certain contractors within the Conference do from time to time submit tenders which appear to the Conference to be quite uneconomic. As the contractor who carries out the work receives the price which he puts forward, the remaining money presumably being shared with all those who tendered, it would appear that the successful contractor is no better off than if he received the lower price only from the building owner.

All the London Builders' Conference can do is to share out among the builders certain sums of money which will tend to reduce the overheads of the contractors concerned arising from the cost of tendering generally. If such a method is desirable, the builders could form a central fund into which contractors could pay, in proportion to the size of contract which they got, to cover the general cost of tendering, and from which regular share-outs could be had, but the present system under which contractors get together and frankly "arrange the tenders" before they are submitted as nominally competitive tenders cannot be in the interest of the building owner.

Among the sub-contractors, the most successful trade in price-fixing matters was the steel industry, which has now been nationalised. This fact alone is scarcely a good recommendation for such a policy.

In the latest issue of the R.I.B.A. *Journal*, the Council has put forward a suggested declaration* which members should require from all tenderers for larger contracts, and I hope that all architects and surveyors both in public and private offices will ensure that this declaration is required of all contractors. There are many other ways of improving efficiency in which the energies of the leaders of the building industry could be better employed.

There is one minor point in your leading article on which I would like to comment —the question of nominated sub-contractors. Architects as a whole invite quotations from nominated specialist sub-contractors for the more highly skilled operations on a competitive basis, and the general contractor has the right under the R.I.B.A. Standard Form of Contract to tender for this work if he so desires. Builders recently have increasingly tended to use sub-contractors themselves, and a large amount of the work normally included for the builder is, in fact, let by him to sub-contractors. This is particularly the case with decorative trades as plastering and painting, and such a method of working has become for better or worse an established method of carrying out building work in this country.

PHILIP BENNETT.

43, Bloomsbury-square,
London, W.C.1.

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To the Editor of *The Builder*

SIR,—Your leading article in the issue of July 27 on the subject of the London Builders' Conference opens up, in my opinion, a trend of thought which could lead to the creation of a policy for the future of the building industry of immense importance.

I will not dwell on the subject of the London Builders' Conference, other than to say—and I trust my blunt statement will not stop publication of this letter—that the writer of your article appears to be extraordinarily misinformed on how the industry operates, this being strange to have to say when we all look to your newspaper as the mouthpiece of our industry in the journalistic field.

For the future I submit there are two planks of the building industry's policy, without which the industry must muddle on as at present and in the exacting world of tomorrow founder on the rocks of decay or worse still perhaps be drowned in the sea of nationalisation.

First, the crazy, uneconomic present-day form of competition must go, and be replaced by real competition—the competition of speed, service, workmanship, and integrity, welded together by the union of economics. At present the competition of economics is the "all-powerful bogey" with the other factors trailing along behind, whereas they should be equal partners in the marriage of all competition. Surely the public, whom we serve, do not study cost *alone* as the all-powerful factor when selecting a motor-car, a house, or, may I say, an architect? Is price alone what built St. Paul's, the Spitfire, the British Commonwealth of Nations or the British spirit?

Second, the present role of the building contractor must be completely changed, and here we can study the North American Continent. The contractor is after all (and it cannot be disputed on facts) by far and away the most important factor in a contract; he carries out 99 per cent. of the actual work, and I am not being unfair to our professional friends when I say that their labours are more than covered by the 1 per cent. Their presence is, in my opinion, vital, but when a Rolls-Royce car is built, is this not the perfect example of a perfect marriage of all parties? How often does a building contractor come into the picture in the early stages as a poor relation and generally stays that way? Does the contractor not find a situation in which the client has selected an architect (without competition) and specialists and nominated sub-contractors (in nearly every case without competition, a practice very much on the increase and, in my view, wrongly), a situation in which the contractor then has to prostitute himself in the scramble for the competitive bone? How much better it would be for the architect first to prepare his plans and specification exactly to the client's requirements, then to seek competition, according to the job, on the basis I name, from three or four contractors (five to six with a large job), and then to discuss with the contractor, as equal partners, the execution of the job, in all its facets, specialist and otherwise. By all means let the client and/or the architect have a preference for a specialist, but discuss it and agree it with the contractor.

I believe, and I know I am far from being alone in this, that this great industry (without which no other industry can exist) has got to establish itself on new foundations worthy of its great part in the life of our country, and to this end the enthusiasm and ideals of all individuals and parties are required to make it work—be they the parties of the National Federation of Building Trade Employers, or any other, and the London Builders' Conference—all on an equal footing with the R.I.B.A., the chartered surveyors and everyone else. So far as you are concerned, Sir, you and your world-famous journal could give a lead which I submit would be of tremendous value and would get us out of the doldrums of the side issues, so

* See page 265 of this issue.—ED.

wrongly reported on, as in your article to which I refer.

W. GORDON LILLY.

Orchard Works,
St. Ann's-street, S.W.1.

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To the Editor of *The Builder*

SIR,—"Is this a private fight or may anyone join in"—is what I am inclined to ask after reading Sir Alfred Hurst's letter in your issue of August 17, since it is that innocent bystander the specialist sub-contractor on whom are landing Sir Alfred's blows in self-defence against your article of July 27.

Seriously, though, I cannot read your statement that "Architects must still continue to protect their clients' interests by nominating specialist sub-contractors to carry out (*not* on a price competitive basis) all the more highly skilled operations" as anything but a reluctant recognition, in the circumstances, of an unwelcome fact, and from the way Sir Alfred continues I am sure that he must have realised that the context makes this the correct interpretation of your meaning.

I take it that *The Builder* favours competition between specialist sub-contractors for nomination to sub-contracts; Sir Alfred, apparently, does, and this organisation certainly concurs. May we, therefore, be allowed to stand aside from the battle?

D. C. MALLAM, Director,
Federation of Associations of Specialists & Sub-Contractors.
Artillery House, S.W.1.

## *LONDON'S TWELVE BEST*

To the Editor of *The Builder*

SIR,—Analysing the eight letters which you have published on this subject I find that 45 buildings have been mentioned. Five of these have been selected four times (Westminster Abbey, Banqueting Hall, St. Paul's, Somerset House and R.I.B.A. building); one three times (Houses of Parliament); and eight twice (Tower, Chelsea Hospital, St. Martin's, Boodle's Club, Royal Albert Hall, Law Courts, Peter Jones' store and Royal Festival Hall); the remaining 31 buildings once only. If from the 14 buildings receiving the highest marks we omit, say, Chelsea Hospital (as Wren is already represented by St. Paul's), and Boodle's Club (on the ground that the eighteenth century is over-represented), we get the following twelve buildings, in order of date:

The Tower of London, Westminster Abbey, the Banqueting Hall, St. Paul's Cathedral, St. Martin-in-the-Fields, Somerset House, Houses of Parliament, Royal Albert Hall, Law Courts, R.I.B.A. building, Peter Jones' store, and Royal Festival Hall.

Only five buildings of my original selection remain, but I agree that the above is a good representative list.

HARI BONA.

## *SHODDY WORKMANSHIP*

To the Editor of *The Builder*

SIR,—I propose to dodge the slings and arrows of outraged Mr. Parker, and pass to the quiet and measured reasoning of your "Provincial Contractor," who has raised some very interesting and factual points.

I do agree that granting Registration Licences to all and sundry, without regard to their capabilities, is not in the best interests of the trade. However, it is difficult to restrict a man from starting up in business on his own account, and some very strong arguments can be brought to support his case. For instance, at the time the present Lord Nuffield branched out from cycle repairing to motor car manufacture, he could boast of no qualifications which would fit him unmistakably for the latter vocation.

Turning to apprentices, I support the views expressed by economists that the two world wars have speeded up scientific progress to such an extent that the nation is now completely unsettled in mind and body. Developments have raced so far ahead that our present way of life has been outmoded, and a restless, unstable, slapdash type of youth, eager to acquire only that superficial knowledge which is necessary to obtain maximum pay rates, has come into being. As though to add to his troubles, he is pitchforked into military service just at the very time when he should be consolidating the foundations of his career.

A possible solution to this problem might be in extending the school leaving age to 16½ or 17 years, and sending the lads straight from school to their military service. Whilst in the Forces, they could be helped to study their future trade, and that awful dead end period between leaving school and starting military service would be abolished.

Then again, the Trade Unions could help far more than they do to create a higher standard of craftsman. The days of the bad employer, such as described in "The Ragged Trousered Philanthropist" are dead and gone, if only for the reason that such a man would have no employees to-day. The operatives are getting a square deal now: but it is plainly obvious that many of them are either unwilling or unable to *give* the employer a reasonable return for his services to them.

It is at this point that the Trade Unions could step in and refuse to admit a man to full membership unless he was a proven craftsman, and had served some form of apprenticeship, either as a late entrant or in some newly devised scheme.

In addition, ruthless action should be taken against those pernicious and vociferous Left Wingers, whose main energy lies in their tongues, and whose main occupation is the perversion of trade agreements between employers and operatives. Recently, one of these red banded gentlemen told me that his primary concern in life was to obtain as much bonus for his "comrades" as possible, quite unrelated to production. This unfortunate "seeker of the light" has, quite obviously, lost even his pride, and must stoop to beg for charity: for what else are incentive payments unrelated to output? Wealth, arising out of hard and unremitting work, is the only way to high reward. Coat off and mouth shut, Mr. Red Tie, and you'll be a man, my son; and what is more, other men will be able to get on with their work without being constantly reminded how hard done by they are supposed to be.

Thus, I must come back to the main theme of my original letter, i.e. proper control at the top. Your correspondent says quite rightly, under his second paragraph, that Governmental bodies have drawn the wrong type of men from the trade and placed them in positions of authority for which they are unsuited, the type of fellow who realises half way through a contract that the structure is not, as he thought, a swimming bath, but a block of flats.

However, whilst we may know what we are building, do we always know how it should be built? Tolerance there must be, for no man is perfect, and when *real* problems come along, then all the ingenuity of the architect, builder, clerk of works, or even the humblest labourer, must be sought to get over them. But what is intolerable is badly or carelessly executed work. Skirtings which wave along the walls like bow-legged mariners; pavings which resemble the Mountains of Mourne and form their own seas when rainwater gathers on their trowel marked, dished surfaces; and so on *ad nauseam*. Who accepts them? Who offers them for acceptance? Whose job is it to check standards as the work progresses, and why in the blazes doesn't he do it?

As I said, we can all find excuses for inefficiency. Refuse to accept bad or shoddy workmanship, and you will not get it for long. Perhaps, as Mr. Harold Clayburn suggests in his letter in your issue of August 10, the procedure for acceptance of tendering might well be reviewed. Theoretically, the contractor who is most efficiently organised should be able to submit the lowest figure. Practically, we are on dangerous ground, as there are many other factors with which we must contend. However, the Simon Committee on the Placing and Management of Building Contracts have this important question under review, and we can only hope that some progressive recommendations will emerge.

Finally, a fairly heavy measure of blame for low standards of workmanship must fall on the present Government for the policy it is pursuing. With the exception of massive office blocks (for servants, civil, the use of) the building industry is directed into low-priced housing work. As this is practically the only sizeable work going on, quite naturally the importance of securing a portion of it becomes vital to contractors, and a bitter price war is started. Were private buildings to be freed again and the virtual clamp-down lifted, if only partially, a very different tale might be told. The private owner has not unlimited funds from which he can draw to maintain his property as the years roll by. He takes good care, therefore, to see that he gets his money's worth during construction. It will be interesting to obtain details in about ten years' time of the cost of repairing the vast State-owned housing schemes. Judging by some of the present standards, that bill is going to be pretty heavy.

A. W. HUDSON.

2, Menelik-road, N.W.2.

# SCOTTISH LOW-COST HOUSING

## Designs Circulated to Local Authorities

FOLLOWING the Secretary of State for Scotland's Press conference on July 27 on low-cost houses, a circular has been sent to Scottish local authorities, conveying details of the new proposals. In addition to the information already given at the Press conference (which was reported, together with reproductions of the plans of the houses, in our issue of August 3), the circular announces that the Scottish Special Housing Association has been asked to build a terrace of eight of the new houses in Edinburgh and Glasgow, in order that local authorities may inspect the new designs.

The circular emphasises, however, that "any local authorities who, for the purpose of reducing costs, wish to proceed with the planning and building of houses according to this or a similar design are free to do so at once; they need not await the completion of the proposed demonstration houses."

The circular also announces that the Department are suggesting to non-traditional house promoters that next year they should offer local authorities a choice between houses built to their present designs and houses incorporating the economies recommended.

The circular (D.H.S. Circular No. 94/1951) states that the Secretary of State for Scotland considers that it is of the utmost importance at this stage to effect all possible economies which would bring down housing costs, may enable at least a proportion of the houses built by local authorities to be let at lower rents than would otherwise be the case, and may make it possible to build more houses within the capital investment approved for housing purposes.

### "The Builder" Competition

There have been indications recently, the circular continues, that the public would be prepared to accept suitable modifications in the design and specification of houses which could be effected without prejudice to the comfort and convenience of the tenants and the general habitability of the houses. Some Scottish architects engaged in local authority housing work have already been experimenting on these lines, and much public interest was shown in the low-cost housing plans produced in the recent competition sponsored by the technical journal *The Builder*. A review of these experiments and the result of investigations which he has himself made has convinced the Secretary of State that worth-while economies can be effected in Scottish housing plans, and the purpose of this circular is to suggest the lines that modifications of the plans might usefully follow.

It is not the Secretary of State's intention to impose a reduction in the housing standards which have come to be regarded as normal in the post-war programme. In particular, he could not agree to any reduction in the soundness and durability of State-assisted houses or in the protection which they afford against cold, damp and noise. Moreover, the standards of size, design and equipment laid down in the Scottish Housing Handbook for normal housing remain in force. But the Secretary of State considers that, side by side with the normal houses, there is room for experiment in modifying the accepted standards without affecting the comfort or convenience of the occupiers. He has accordingly been considering whether it is possible to secure some reduction in cost by—

(*a*) More careful planning which would bring down the overall floor area of a house without affecting living standards;

(*b*) omitting some of the less essential items of equipment; or

(*c*) by a combination of these methods.

In formulating proposals along these lines the Secretary of State has taken full advantage of the experiments already made in this and other countries, and he has also discussed his proposals with representative Scottish housewives, to whom he is grateful for comments and suggestions.

### Living Space

*Space Standards and Living Standards.*—Recent studies have shown that certain reductions in floor area in some parts of a house, mainly in bedrooms, halls and landings, can not only result in effective gains in area in other parts (e.g., living-room and storage space), but can give the architect freedom to plan more economically and with greater convenience. As an indication of the type of modification which is possible, the Department's architects have prepared specimen type plans of three- and four-apartment houses (the four-apartment house having one "one-person" bedroom) with superficial areas of 680 sq. ft. and 860 sq. ft. respectively, compared with the areas of 770 sq. ft. and 930 sq. ft. for corresponding houses laid down as maxima in the Scottish Housing Handbook, Part 3. This saving has been made possible by adopting an entrance porch instead of a normal through hall, and by reducing communication space to the minimum compatible with convenience. Specimen type plans are issued, and the appendix to the circular contains notes on their main features.

### Room Areas and Equipment

Although the specimen plans show a reduction of some 70 sq. ft. in area over the normal standards of size, they do not involve any reduction in living standards or in amenity. It is true that as an unavoidable consequence of the planning adjustments bedroom sizes have been reduced slightly, but this loss in floor area is more than compensated by the following gains in convenience:—

(*a*) The living-room in the four-apartment house is larger than usual—40 sq. ft. above the accepted standard of 180 sq. ft.;

(*b*) the expense and awkwardness of a pend or back service road, to give access to the back premises, has been avoided by providing the useful extra facility of a utility room or inner lobby which connects with the kitchen and thus provides private through access from front to back;

(*c*) the bathroom is upstairs. This is rarely possible within the limits of the present minimum bedroom sizes in four-apartment houses, though many people regard it is a distinct advantage.

In short, these speciment plans demonstrate that living standards can be raised even if the total area of the house is reduced.

The various items of equipment which are regarded as standard in the post-war house are listed in Part 4 of the Scottish Housing Handbook. They include not only built-in items such as wardrobes and kitchen cupboards, but fitments such as gas and electric cookers, which are not a component part of the structure of the house. Experience has shown, however, that all the fittings and equipment provided by the local authority may not be required. For example, many families already have wardrobes or prefer to buy a complete bedroom suite containing a wardrobe, with the result that the built-in wardrobe and the space which it takes up in the house are not fully used. Again, many tenants already have gas or electric cookers of their own and do not require to have this relatively costly item provided for them by the local authority. Thus the provision of a standard set of equipment in local authority houses may in some cases lead to unnecessary expenditure.

The Secretary of State considers, therefore, that local authorities might justifiably experiment with the building of a certain number of houses without the full list of equipment recommended in Part 4 of the Scottish Housing Handbook. It is not intended that local authorities should omit from the plans the essential facilities such as baths, sinks and tubs, etc., but they might consider the possibility of providing a number of houses without, e.g., built-in wardrobes (except in the smallest bedroom of a four-apartment house) and cupboards for coats or brooms, washboilers and gas or electric cookers—though the necessary space and gas installation or electric points should be provided to enable the tenant to install these latter items for himself if he wishes.

### Savings in Cost

The proposals embodied in the plans result in appreciable saving in cost. Apart from the reduction in total floor area, the plans involve in certain types a narrower road frontage, which effects a saving on roads and services; and there may also be a saving in both capital and maintenance costs because of the elimination of a pend or back service road. It is not possible to make a close estimate of the economy which may be expected from the adoption of the suggested planning modifications and modified equipment for which the plans provide, but figures prepared by the Department's technical officers suggest that the cost of a four-apartment "through aspect" house built to the suggested design in the industrial belt might be about £120 to £140 less than the cost of a house built to the full Housing Handbook standards of design and equipment.

### Demonstration Houses

*General.*—The new proposals have already been discussed with the Scottish Special Housing Association, who have been asked to build a terrace of eight traditional houses in Glasgow and a similar terrace in Edinburgh to demonstrate the new designs to local authorities. These houses will be built as quickly as possible and the Department will tell local authorities when they are finished and available for inspection.

The Secretary of State wishes to emphasise, however, that any local authorities who, for the purposes of reducing costs, wish to proceed with the planning and building of houses according to this or a similar design are free to do so at once: they need not await the completion of the proposed demonstration houses by the Scottish Special Housing Association. The Department's architects

will be prepared to give any advice and assistance that may be desired when the local authority's plans are in sketch form.

The Department propose to have an early meeting with the sponsors of approved non-traditional houses in Scotland to discuss the incorporation in the plans of non-traditional types of economies such as are contained in the type plans prepared by the Department's architects. It is proposed to arrange that next year the firms in question will offer to local authorities a choice of non-traditional houses according to the present approved plans and of similar houses incorporating the economies referred to. This will have an important impact on the programme of the Scottish Special Housing Association which now consists almost entirely of non-traditional houses. The Secretary of State, accordingly, asks those authorities who may be approached by the association in connection with the building of non-traditional (or in the exceptional case, traditional) houses incorporating these economies, to give the association their fullest co-operation in carrying out their proposals.

The Secretary of State wishes to make it clear that it is for each local authority to consider the proposals prepared by the Department's architects and to decide whether they should include a proportion of low-cost houses in their schemes. The particular modifications contained in the type plans are not in any sense obligatory: they may suggest other proposals which the local authority would prefer as being more suitable to the needs of their district, and the Secretary of State would welcome experiments by local authorities themselves in this direction.

Just as the Secretary of State hopes that local authorities will undertake experiments in economical building techniques, he is himself continuing his inquiries in this field, the circular goes on. In particular, he recently arranged for Mr. Fraser, the joint Parliamentary Under-Secretary of State, to visit the Netherlands and study low-cost housing there. As a result, the Secretary of State is now considering further developments in economical design with particular reference to internal layout and equipment, and he proposes to communicate the results to local authorities for their consideration as soon as possible.

### Main Features of Design

*Main features of the Experimental Low-Cost Type Plans* [reproduced in *The Builder* of August 3] as given in an Appendix to the Circular:—

1. The plans are new terrace types which avoid the expense and the maintenance problem of the pend or back service road. Access from the front to back is through the kitchen and the utility room or inner lobby.

2. Unusable space is reduced to a minimum by cutting out the usual hall and substituting a small entrance lobby which gives access to the living-room and stairs. Lobby and landing space is thus approximately 50 per cent. lower than normal in the 3-apartment house and 70 per cent. lower in the 4-apartment house, but the design allows easy moving of furniture.

3. This more economical planning of communicating areas permits a reduction in overall area of about 90 square feet in the 3-apartment house and 70 square feet in the 4-apartment. There is also a reduction in frontages, which in turn reduces the cost of building and of roads, services and land.

4. The reduction in bedroom sizes is compensated for by a larger living-room and an added utility room (or inner lobby in the 3-apartment house).

5. Ceiling heights are 7 ft. 9 in. in the ground floor and 7ft. 6 in. in the upper floor. This helps heating efficiency and saves building cost.

6. The roof spans in both types are the same, thus allowing a mixture of types in a terrace.

7. The designs can be built in traditional construction but are readily adaptable to non-traditional systems.

8. The living room (which is 40 sq. ft. larger than normal in the 4-apartment house) has back and front aspects, allowing flexibility in siting. This arrangement allows the dining furniture to be permanently placed near the kitchen and leaves undisturbed space for sitting round the fire.

9. The kitchen is of normal size, and there is space for the normal equipment.

10. The store or utility room is an additional feature. In the 4-apartment type it gives space for a pram, bicycles, fuel, shelves, brooms. In the 3-apartment type it is smaller but still allows for a pram and storage (including fuel). In the 4-apartment type a separate service door is provided in the store room, in front of the house. In the 3-apartment type, the front door and entrance lobby serve for both main and service entrance. A clothes pulley could be provided in the utility room of the 4-apartment type. There is also space for any special equipment, such as a hinged work bench, which the tenant may wish to install.

11. The stair has been reduced in width from the normal 3 ft. 3 in. to the British standard of 2 ft. 11 in.

12. The bathroom is upstairs—an advantage not normally obtainable with present Scottish plans.

13. The bedrooms have been reduced to secure the other advantages mentioned above.

Their floor areas compare with present sizes as follows:—

| | *Scottish Housing Handbook* | *Low-cost Plans 4-apartment* | *3-apartment* |
|---|---|---|---|
| First bedroom | 145 to 155 | 136 | 136 |
| Second bedroom | 115 to 125 | 116 | 111 |
| Third bedroom | 90 (minimum) | 70 | — |

A built-in clothes cupboard is provided only in the third bedroom of the 4-apartment house, which cannot conveniently hold a wardrobe.

## MARINE TECHNICAL COLLEGE, SOUTH SHIELDS

### Some Extracts from the Winners' Report

WE illustrated in our last issue the winning designs in this competition for a proposed Marine and Technical College, South Shields, submitted by J. D. Meade Taylor, M.A., A.R.I.B.A., and Joyce V. Wilson, A.R.I.B.A., A.A.Dip., A.M.T.P.I. Now appended is a summary of their report:

The main entrance and approach way is located opposite the future road which connects with Sunderland-road, and the service road is constructed round the north and east perimeter of the site, where it serves kitchens, workshops, and boiler houses.

The first stage is planned in one connected group, which can be extended in the second stage with the minimum of interference to the work and running of the college. The second stage development takes the form of separate wings for each department, each of which can, if necessary, be built in separate stages and yet still be attached to the first group.

It was not found necessary to exceed two storeys in order to fulfil the requirements of the college, and, since it appeared from the conditions that this would be preferred, no third storey is provided, except for the observatory, one caretaker's flat and the projection room group.

A rigid structural steel frame is recommended as being the most economical in materials and the most suitable to the particular conditions of this site with the possibility of subsidence. The building is designed to stand on a series of reinforced-concrete rafts which are strengthened with beams and ribs to withstand collapse of the surface formation. The standard structural bay is 9 ft. 8 in. in width (centre to centre of columns), with a clear room depth of 21 ft.

External walls in general consist of an outer leaf of 4½ in. facing bricks and an inner leaf of foam slag or cellular concrete block. The floors and roof are hollow tile or precast concrete slabs. Classrooms, workrooms and laboratories are finished with plaster or fairface brickwork, and floor finishes are fleximer or thermoplastic tiles.

The estimated cost of the buildings and site layout is approximately £420,000.

Mr. Michael R. Crux, Student R.I.B.A., was associated with Mr. C. W. H. Wright, A.R.I.B.A., in the preparation of the design awarded second premium in the competition for South Shields Marine and Technical College.

## BOOK

THE ARCHITECTS' AND BUILDERS' COMPENDIUM. Published by the Compendium Publishing Co., Ltd., 23, Tavistock-street, W.C.2. Price £2 2s.

THE 1951 edition of "The Architects' and Builders' Compendium" has recently been introduced and is the sixty-fifth issue to be published. The editorial section, which has been further developed, is based on general and technical information, with articles on matters affecting the whole of the building trade.

Sections one to twenty contain information on manufactures and products of various members of the building organisation, together with an index for each group. These sections include asbestos cement roofing, dampcourses, wood preservatives, farm buildings and equipment, architectural metal work, structural steelwork, parquetry, concrete reinforcement, strong-rooms, metal windows, copper and zinc roofing, lift gear, architectural joinery, sliding and folding doors and partitions, electrical installation, sewage disposal, opening gear and contractors' plant. Each section is listed alphabetically and any required firm can be readily found.

The Compendium register of architects is contained in Section 21, which gives names and addresses of architects practising, including county, education and borough architects, in London, the Provinces, Scotland, Wales, Northern Ireland and Eire. In the following sections the same information is given for members of the Institute of Landscape Architects and the R.I.C.S.

The last section in this year's issue is devoted to a register of building contractors in the United Kingdom and Eire. The whole compendium forms a guide which is an essential to any member of the building industry.

# THE M.O.W. ANNUAL REPORT

## Further Extracts Relating to Building Materials, Amenity and Cultural Services and Statistical Information

FURTHER extracts from the annual report of the Ministry of Works for 1950 (Cmd. 8306, Stationery Office, 1s. 6d.), which was summarised in our last issue, are given below. The information relates to the production, distribution and consumption of building materials and the Ministry's amenity and cultural services, in addition to which a number of the statistical appendices are reproduced.

*Production and Distribution of Building Materials.* With the exception of a few materials, of which bricks and cement were the most important, the supply of building materials and fitments for which the Ministry was production authority was sufficient during 1950 both to meet the needs of the building industry at home and to maintain the volume of exports at the 1949 level. Figures of production and stocks of building materials and fitments are shown in Appendices IX and X. (See below.)

*Bricks.* Last year's Report pointed out that it was only possible to meet the demand for bricks in 1949 by drawing on accumulated stocks. The heavy demand was maintained in 1950 and although production increased substantially it was never quite sufficient to meet the demand; stocks were reduced and there were delays in delivery, especially where the better quality bricks were required.

Brick manufacturers' efforts to increase output were restricted by their inability to obtain sufficient labour, a problem which was often aggravated by a shortage of houses near the brickworks. The Ministry carried out a survey of the industry to assess the problems of individual manufacturers and undertook discussions with the industry with a view to increased production.

### Cement Production Increased

*Cement.* More cement was produced than in any previous year, but there was still not enough to prevent local shortages. The mild weather in the early part of 1950 enabled the building industry to operate at a higher level than is normal for that time of year and as a result stocks of cement at the end of the winter were lower than usual. The unusually low stocks accounted for a good deal of the irregularity in supply during the following summer when building activity was at its height.

Output of cement was limited not by labour shortages but by the capacity of plant. During the year a new cement works came into operation in North Wales and other plants were extended; the industry also made steady progress with work and plans for further extensions.

*Other Materials and Fitments.* Manufacturers of flat glass had little difficulty in increasing their output when demand recovered from the setback experienced in 1949. Makers of plasterboard, however, were in the less happy position of being unable to meet completely an improved demand for their product because of a shortage of the paper necessary to its manufacture. The metal window and door frame industry was again hampered by scarcity of steel. Asbestos cement products could have been produced in greater quantities but for the continued shortage of raw asbestos fibre.

Generally speaking, the producers of building fitments had a better year, although some had difficulty in getting materials and at the end of the year they were beginning to feel the effects of the world shortage of some basic metals. There was a marked increase in the number of gas appliances produced as compared with 1949; for instance, an increase of 30 per cent. in the number of fires and 25 per cent. in the number of water heaters. An important development in this field was the production of a die-cast gas meter, in contrast to the normal method of making these meters from tin-plate. At least one firm started mass-producing this new type of meter during the year.

### Development of Newer Materials

*Prestressed Concrete.* Encouraging progress was made in securing a wider recognition of the advantages of prestressed concrete. At the end of the year there were 20 factories making prestressed concrete products and 20 prestressed concrete bridges had been constructed. This material was also being used in structures for the Festival of Britain on the South Bank, notably in a bridge connecting the Royal Festival Hall with Waterloo Bridge.

The Ministry continued to act as production authority for the general development of prestressed concrete, and an observer attended meetings of the Prestressed Concrete Development Group, which was mentioned in last year's Report.

In October, 1947, the Ministry became responsible for the production of prestressed concrete railway sleepers through contracts with private firms and Royal Ordnance Factories. The Railway Executive decided in 1950, in view of reductions in their capital investment programme, to curtail their demand for these sleepers from 700,000 to 300,000 a year. Production at Royal Ordnance Factories ceased in the summer of 1950, and in November the Ministry transferred the contracts with private firms to the Railway Executive. During the three years that the Ministry was responsible for the contracts, 1,160,000 sleepers were produced and, although they cost more than timber sleepers, they saved imports of timber, some of which would have cost dollars.

The multi-storey building of prestressed concrete construction for H.M. Stationery Office in Edinburgh was completed and the building, which was formally opened in December, 1950, by the Parliamentary Secretary to the Ministry, is illustrated in the Report.

Fewer prestressed concrete transmission line poles and telegraph poles were used than was at one time expected because timber poles were more readily available than before.

*Clinker Cleaning.* Experiments conducted at the pilot plant at Twickenham, which was mentioned in last year's Report, showed that clinker from certain power stations could be satisfactorily cleaned by crushing, screening and removing combustible materials, to provide a lightweight aggregate for use in the manufacture of load-bearing concrete blocks. An interim report on the provisional results of these experiments was being prepared at the end of the year and an alternative method of cleaning the clinker was also being tried.

*Imports.* Only a comparatively small volume of building materials and fitments was imported. Open General Licences for the import of materials and fitments were extended to Belgium and Western Germany in pursuance of the policy of freeing intra-European trade.

*Ancient Monuments and Historic Buildings.* During the year 321 monuments (136 in England, 121 in Wales and 64 in Scotland) were scheduled under the Ancient Monuments Acts, bringing the total number of monuments scheduled up to 7,120 at the end of 1950. The Ministry accepted guardianship of 37 monuments, including Berney Arms Mill, the first working windmill that the Ministry has accepted for guardianship.

*Excavations.* The excavations at Jarlshof, Shetland, which aroused widespread interest in archæological circles, were continued. This monument, and others on the mainland of Orkney, were of special interest to members of the Viking Congress, held at Lerwick in July, and members of the Congress expressed admiration for the Ministry's work. Excavations have been undertaken at many other sites and important archæological discoveries were made; a particularly interesting discovery was that of part of Walden Abbey, which was uncovered during work at Audley End.

*The Tower of London.* At the Tower of London the reconstruction of the war-damaged Old Hospital Block, including the installation of a new central boiler house, was almost finished at the end of the year. The tomb of the Duke of Exeter was removed to the Tower from St. Katherine's Chapel, Regent's Park, to be re-erected in the Chapel of St. Peter ad Vincula.

The Armouries at the Tower of London form part of the responsibilities of the Minister of Works. They are under the immediate supervision of the Master of the Armouries and constitute the national collection of armour, arms and military equipment from the early Middle Ages to 1914.

In 1950, 150 items were added to the collection of exhibits in the Armouries. Display facilities in the Armouries were considerably improved by the installation of new cases and the reconditioning of the old, as part of a scheme of improvement extending over a number of years. The funeral accoutrements of Edward, Prince of Wales ("The Black Prince") from his tomb in Canterbury Cathedral were cleaned in the Armouries' workshop and placed on exhibition at the Armouries in May. A descriptive booklet of the accoutrements was published and both this and the exhibition, which continued into 1951, aroused great interest.

*Exhibitions and Visitors.* An exhibition of items of archæological interest was again held in Edinburgh during the summer. It proved to be an even greater attraction than in 1949 and over 33,000 people visited the exhibition. Nearly 4½ million people paid for admission to Ancient Monuments, Historic Buildings and Royal Palaces in the Ministry's care during 1950; total receipts were nearly £100,000.

### Museums and Galleries

*Festival of Britain.* The Ministry was carrying out certain works of restoration and improvement which it hoped to finish in time for the Festival of Britain. The most important project was the new centre section of the Science Museum, which is being used as the main hall for the Science Exhibition Centre for the Festival. This work made good progress during the year. Kensington Palace will provide a temporary home for the London Museum and at the end of 1950 it was expected that the necessary adaptations

to the Palace would be finished in time for the Museum to open there during the Festival. It also seemed likely that Apsley House, which will house the Wellington Museum, would be repaired and ready for opening in 1951. At the British Museum the main staircase, which was damaged during the war, was being restored. In Edinburgh, internal redecoration of the Royal Scottish Museum was put in hand; the Museum is being used for Festival events, including meetings of the British Association and a Scottish Arts and Crafts Exhibition.

*Statues and Pictures.* Statues which were undergoing repairs of war-damage during the year included the Albert Memorial, the Guards' Memorial in Horse Guards Parade, and the statue of King Edward VII in Waterloo-place. In the re-planned Parliament-square, statues were moved to their new sites. At Greenwich the Royal Naval Division Memorial was being erected.

*The Royal Parks.* Further progress was made in the removal of war-time encroachments from the Parks. By the end of the year the use of land for allotments had ceased in all except Holyrood Park, where Edinburgh Corporation are to retain a small area for cultivation until the end of 1952.

### APPENDIX I.—BUILDING AND CIVIL ENGINEERING INDUSTRY
**Estimated Value of Output in 1950 (£ million)**

| | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Total |
|---|---|---|---|---|---|
| Factories and Industrial Premises* | 22.9 | 27.4 | 30.7 | 28.6 | 109.6 |
| Storage Premises, Warehouses and Depots* | 2.4 | 2.8 | 2.9 | 2.9 | 11.0 |
| Coal mines and Opencast Coal Production* | 4.7 | 5.6 | 5.5 | 4.1 | 19.9 |
| Work for Electricity, Gas, Water and Transport undertakings* | 10.3 | 11.5 | 12.6 | 12.4 | 46.8 |
| Agricultural Work* | 2.5 | 3.4 | 3.7 | 3.7 | 13.3 |
| Shops and Commercial Premises* | 8.0 | 9.4 | 7.8 | 6.1 | 31.3 |
| Schools, Universities and Hospitals* | 9.7 | 10.8 | 12.4 | 11.9 | 44.8 |
| Construction of Permanent Houses (including site preparation) | 55.2 | 60.6 | 61.2 | 59.6 | 236.6 |
| Other Housing and all other work | 97.3 | 88.1 | 89.6 | 95.9 | 370.9 |
| Total Output of Building and Civil Engineering Firms with operative | 213.0 | 219.6 | 226.4 | 225.2 | 884.2 |
| Building and Civil Engineering Firms employing no operatives | 5.7 | 6.9 | 7.5 | 7.3 | 27.4 |
| Specialist Firms | 33.9 | 33.9 | 33.9 | 33.9 | 135.6 |
| Directly employed labour—Staffs of Local Authorities, Public Utilities and Government Departments | 52.5 | 52.4 | 52.3 | 52.2 | 209.4 |
| Firms in other industries | 12.5 | 12.5 | 12.5 | 12.5 | 50.0 |
| Total Output | 317.6 | 325.3 | 332.6 | 331.1 | 1,306.6 |

* The figures exclude work carried out under annual maintenance licences and work exempted from authorisation and licensing. Such work is included under "Other Housing and all other work."

### APPENDIX II. VALUE OF BUILDING AND CIVIL ENGINEERING WORK AUTHORISED AND LICENSED. 1950* (£ thousand)

| | Total | Work Licensed by Ministry of Works | | | | | | | Work Licensed by Local Authorities | Work Authorised by Government Departments |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Total | | | Industrial and Commercial Work | Schools, Universities and Hospitals | Agricultural Work | Other | | |
| | | All Work | New Work | Repair and Maintenance | | | | | | |
| 1950 | | | | | | | | | | |
| 1st Quarter | 180,436 | 58,636 | 43,118 | 15,518 | 42,831 | 1,032 | 3,065 | 11,708 | 21,305 | 100,495 |
| 2nd Quarter | 216,328 | 67,837 | 52,176 | 15,561 | 52,132 | 1,788 | 3,907 | 10,010 | 19,031 | 129,460 |
| 3rd Quarter | 197,448 | 62,126 | 47,794 | 14,332 | 42,252 | 1,431 | 3,811 | 14,632 | 19,127 | 116,195 |
| 4th Quarter | 207,709 | 51,547 | 37,989 | 13,558 | 33,261 | 1,012 | 3,042 | 14,232 | 21,189 | 134,973 |
| Total for 1950 | 801,921 | 240,146 | 181,077 | 59,069 | 170,476 | 5,263 | 13,825 | 50,582 | 80,652 | 481,123 |

* Excluding annual maintenance licences, work below licensing limits and maintenance work authorised by Local Authorities and Public Utilities. No adjustment has been made for tenders notified as withdrawn or for licences notified as having lapsed.

### APPENDIX XI.—BUILDING MATERIALS PRICE INDICES—GREAT BRITAIN

| Year and Quarter | All Building Materials | House Building Materials |
|---|---|---|
| | Base: June 30, 1949 = 100 (1) | Base: June 30, 1949 = 100 (2) |
| 1946 ... I | 80 | 80 |
| II | 82 | 83 |
| III | 85 | 85 |
| IV | 86 | 86 |
| 1946 Average ... | 83 | 84 |
| 1947 ... I | 89 | 89 |
| II | 93 | 92 |
| III | 97 | 96 |
| IV | 98 | 98 |
| 1947 Average ... | 94 | 94 |
| 1948 ... I | 100 | 100 |
| II | 100 | 101 |
| III | 100 | 100 |
| IV | 102 | 102 |
| 1948 Average ... | 101 | 101 |
| 1949 ... I | 103 | 103 |
| II | 101 | 101 |
| III | 101 | 101 |
| IV | 103 | 103 |
| 1949 Average ... | 102 | 102 |
| 1950 ... I | 103 | 102 |
| II | 103 | 103 |
| III | 108 | 107 |
| IV | 111 | 108 |
| 1950 Average ... | 106 | 105 |

The index in column (1) above is based on price quotations for 48 groups of materials; the method of calculation was to multiply the price relatives for the selected materials by fixed weights determined from estimates of the values of materials used in building and civil engineering work in 1948. This Index is a new one and is now published every month in the *Board of Trade Journal*. It differs very little from the Index published in earlier Annual Reports of the Ministry.

The Index in column (2) is a subsidiary Index to indicate the price changes of materials used for traditional housing.

### APPENDIX V.—REGISTRATIONS UNDER DEFENCE REGULATION 56AB
**Number of Firms by Regions and Trades, May, 1950* "13 Trades" †**

| Trade | Northern | E. & W. Riding | North Midland | Eastern | London | Southern | South Western | Wales | Midland | North Western | Scotland | South Eastern | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| General builders | 2,495 | 3,560 | 3,951 | 5,592 | 16,135 | 4,426 | 5,879 | 3,096 | 5,630 | 6,162 | 2,060 | 4,977 | 63,963 |
| B. & C.E. contractors | 94 | 158 | 167 | 145 | 379 | 113 | 174 | 166 | 191 | 195 | 214 | 134 | 2,130 |
| Civil engineering contractors | 39 | 71 | 73 | 82 | 255 | 70 | 61 | 44 | 138 | 99 | 113 | 65 | 1,110 |
| Plumbing contractors | 580 | 1,326 | 907 | 773 | 1,760 | 634 | 849 | 481 | 1,032 | 2,059 | 1,168 | 694 | 12,263 |
| Joinery and carpentry firms | 650 | 1,391 | 954 | 499 | 613 | 298 | 745 | 376 | 472 | 1,200 | 1,968 | 250 | 9,416 |
| Painting contractors | 1,236 | 2,949 | 2,136 | 1,127 | 2,236 | 1,035 | 1,293 | 1,131 | 1,713 | 3,777 | 1,966 | 1,018 | 21,617 |
| Roofing contractors | 84 | 187 | 107 | 75 | 301 | 67 | 49 | 54 | 86 | 265 | 627 | 57 | 1,959 |
| Plastering contractors | 108 | 300 | 216 | 263 | 720 | 177 | 132 | 141 | 272 | 401 | 489 | 205 | 3,424 |
| Glazing contractors | 20 | 39 | 17 | 37 | 226 | 24 | 29 | 24 | 69 | 75 | 93 | 37 | 690 |
| Demolition contractors | 16 | 41 | 19 | 11 | 60 | 12 | 12 | 6 | 31 | 48 | 18 | 17 | 291 |
| Scaffolding specialists | 1 | — | 1 | 1 | 18 | — | 1 | 1 | 1 | 5 | 2 | 1 | 32 |
| Shopfitters | 4 | 10 | 5 | 4 | 94 | 1 | 11 | 13 | 12 | 17 | 6 | 7 | 184 |
| Miscellaneous | 22 | 69 | 43 | 33 | 209 | 39 | 31 | 30 | 78 | 87 | 104 | 37 | 782 |
| TOTAL | 5,349 | 10,101 | 8,596 | 8,642 | 23,006 | 6,896 | 9,266 | 5,563 | 9,725 | 14,390 | 8,828 | 7,499 | 117,861 |

* The figures do not take account of firms failing to make returns.

† The "13 Trades" are the following classes of firms: General builders, building and civil engineering contractors, civil engineering contractors, plumbing contractors, joinery and carpentry firms, painting contractors, roofing contractors, plastering contractors, glazing contractors, demolition contractors scaffolding specialists shopfitters miscellaneous.

## APPENDIX IX.—PRODUCTION AND STOCKS OF BUILDING MATERIALS, 1950

**Production figures relate to Great Britain except where otherwise stated. Stock figures relate to the end of the year**

| | | *Building Bricks* | | *Cement** | | *Asbestos Cement Sheeting* | *Roofing Slates* | | *Slates (Damp Proof Course)* | | *Roofing Felt* | | *Clay Roofing Tiles* | | *Concrete Roofing Tiles* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | *Prod.* | *Stocks* | *Prod.* | *Stocks* | *Prod.* | *Prod.* | *Stocks* | *Prod.* | *Stocks* | *Prod.* | *Stocks* | *Prod.* | *Stocks* | *Prod.* | *Stocks* |
| | | *Millions* | | *Thousand Tons* | | *Thousand Tons* | *Thousand Squares* | | *Thousands* | | *Thousand Rolls* | | *Thousand Squares* | | | |
| 1950 | 1st Quarter ... ... | 1,428 | 174 | 2,167 | 203 | 80.7 | 74.8 | 26.9 | 2,008 | 466 | 787 | 199 | 170.3 | 229.5 | 202.6 | 176.3 |
| | 2nd Quarter ... ... | 1,479 | 115 | 2,478 | 200 | 72.4 | 76.0 | 28.5 | 2,029 | 412 | 712 | 155 | 174.7 | 219.9 | 209.6 | 165.2 |
| | 3rd Quarter ... ... | 1,507 | 109 | 2,523 | 224 | 73.8 | 75.5 | 32.1 | 2,026 | 341 | 693 | 150 | 174.4 | 215.0 | 209.0 | 160.1 |
| | 4th Quarter ... ... | 1,507 | 166 | 2,584 | 274 | 91.3 | 73.7 | 36.2 | 1,892 | 478 | 810 | 132 | 177.7 | 222.1 | 215.7 | 162.2 |
| Total for 1950 ... ... | | 5,921 | 166 | 9,752 | 274 | 318.2 | 300.0 | 36.2 | 7,955 | 478 | 3,002 | 132 | 697.1 | 222.1 | 836.9 | 162.2 |

| | | *Plasterboard* | | *Gypseous Plaster (Hardwall)* | *Gypsum* | *Whiting* | | *Stoneware Pipes* | *Cast Iron Pipes and Fittings** | | | *Rainwater Goods* | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | *Soil* | *Smoke* | *Water* | *Cast Iron and Steel** | *Alumin-ium*†* | *Asbestos Cement†* |
| | | *Prod.* | *Stocks* | *Prod.* | *Prod.* | *Prod.* | *Stocks* | *Prod.* | *Production* | | | *Production* | | |
| | | *Thousand square yards* | | *Thousand tons* | | | | *Thousand tons* | *Thousand tons* | | | *Thousand tons* | | |
| 1950 | 1st Quarter | 11,197 | 1,317 | 70.2 | 289.1 | 49.1 | 2.0 | 114.7 | 11.03 | 1.90 | 1.20 | 17.84 | 3.11 | 6.73 |
| | 2nd Quarter | 12,122 | 1,400 | 71.8 | 294.3 | 51.6 | 2.7 | 116.2 | 9.69 | 1.91 | 1.04 | 18.06 | 3.19 | 6.68 |
| | 3rd Quarter | 10,774 | 969 | 68.8 | 289.0 | 46.7 | 3.0 | 110.7 | 8.92 | 1.63 | 1.06 | 18.15 | 4.04 | 6.55 |
| | 4th Quarter | 10,698 | 723 | 71.8 | 295.0 | 48.5 | 2.3 | 120.6 | 12.88 | 1.92 | 1.24 | 18.74 | 4.34 | 6.78 |
| Total for 1950 | | 44,791 | 723 | 282.6 | 1,167.4 | 195.9 | 2.3 | 462.2 | 42.52 | 7.36 | 4.54 | 72.79 | 14.68 | 26.74 |

* United Kingdom figures.

† Figures are in terms of cast iron equivalents.

## APPENDIX X.—PRODUCTION AND STOCKS OF BUILDING FITMENTS, 1950 (United Kingdom Figures)

| | | *Sinks* | *Lava-tory Basins* | *Baths* | *Metal Windows and Doors* | | *Inde-pendent Boilers* | *Cookers* | | | *Wash Boilers* | | *Water Heaters* | | *Meters* | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | *Solid Fuel** | *Gas* | *Electric* | *Gas* | *Electric* | *Gas* | *Electric †* | *Gas* | *Electric* |
| | | *Production* | | | *Prod.* | *Stocks* | *Production* | | | | | | | | | |
| | | *Thousands* | | | *Thousand sq. ft.* | | *Thousands* | | | | | | | | | |
| 1950 | 1st Quarter ... ... | 222.4 | 301.0 | 132.2 | 11,093 | 3,117 | 33.2 | 50.5 | 203.6 | 69.3 | 102.1 | 31.5 | 45.4 | 38.0 | 248.5 | 300 2 |
| | 2nd Quarter ... ... | 218.5 | 317.7 | 134.3 | 10,712 | 2,859 | 33.8 | 54.2 | 202.2 | 62.8 | 89.6 | 31.3 | 41.1 | 49.0 | 357.0 | 343.1 |
| | 3rd Quarter ... ... | 217.7 | 294.8 | 130.5 | 10,680 | 2,459 | 30.1 | 46.3 | 192.7 | 64.2 | 96.5 | 32.1 | 46.1 | 52.3 | 330.3 | 352.8 |
| | 4th Quarter ... ... | 250.9 | 326.2 | 146.8 | 12,332 | 2,529 | 30.9 | 49.6 | 216.1 | 78.2 | 112.6 | 31.7 | 53.0 | 51.6 | 348.3 | 407.4 |
| Total for 1950 ... ... | | 909.5 | 1,239.7 | 543.8 | 44,817 | 2,529 | 128.0 | 200.6 | 814.6 | 274.5 | 400.8 | 126.6 | 185.6 | 190.9 | 1,384.1 | 1,403.5 |

*Notes.*—* Includes combination and back-to-back grates with boilers. † Electric immersion heaters.

# THE SOFTWOOD POSITION

## Price of Yugoslavia Whitewood

Messrs. Horsley, Smith and Co. (London), Ltd., Cannon Wharf, Evelyn-street, S.E.8, write: May we refer to the article headed "The Softwood Position" in your issue of August 3, for we think that the observations of your correspondent regarding the recent contract signed by Timber Control with Yugoslavia are somewhat misleading.

Timber Control have paid £87 10s. per standard 7 in. deal and batten, basis c.i.f.—not landed. Before the goods are landed, duty, port and dock dues, lighterage, piling and loading, with other incidental charges, must be added to this figure of £87 10s. To this landed figure, Timber Control will wish to add their administrative overhead charges (and doubtless some profit) before making up their figure for selling to the timber importer. The timber importer is entitled to his profit, and obviously the final figure will be very different from £87 10s. c.i.f.—not landed!

We feel your correspondent is optimistic in suggesting that Timber Control will probably drop their reselling price to the trade of the Yugoslavian whitewood. Their price to the trade at the moment is a little under the c.i.f. price of £87 10s. of the new contract. As the balance of the old Yugoslavian contract was by mutual arrangement cancelled, it does not seem likely that the Board of Trade will sell goods from the new contract at less than cost.

Our correspondent replies: Taking the letter as it stands, it is quite correct that the c.i.f. price for Yugoslav whitewood was £87 10s. c.i.f., which means the price to Timber Control over the ship's rail at a British port. It would be the price of the timber dumped on the quayside, should this ever happen, but it is usual for Control to sell ex-ship through national softwood brokers to the importer, who usually adds about 22s. 6d. a standard for his work in bringing the timber into the yard. Your correspondents are taking the term "landed" to mean the cost of the timber into the yard, which is a general interpretation in the timber trade itself, but not strictly accurate. It was not suggested, as far as I remember, that the timber could be sold at £87 10s. a standard to the builder.

The aim of the article was to show that Control were, in fact, buying timber cheaper than the trade, who are paying about £84 a standard for whitewood from Sweden and Finland f.o.b. Most timber merchants sell at replacement cost, and this should mean that they can put Yugoslav whitewood on to the market more cheaply in coming months.

# OBITUARY

### Arthur Blomfield Jackson, F.R.I.B.A.

We regret to announce the death of Mr. Arthur Blomfield Jackson, F.R.I.B.A., of Hampstead, at the age of 83.

### Lawrence Bright

The death has taken place of one of the oldest architects in Nottingham, Mr. Lawrence Lee Bright, a nephew of the late Sir Joseph Bright. Born in Nottingham in 1872, Mr. Bright was founder of the firm of Messrs. Bright and Thoms, architects, who had carried out much housing and commercial work in the Nottingham area.

# STEEL RATIONING

## Reintroduction of Former Arrangements for Distribution

THE Ministry of Supply has announced that control over the distribution of the main forms of carbon steel will be introduced on December 3 next. Roughly 95 per cent. of the steel used in Britain is carbon steel.

The Government's decision to introduce this control was made known by the Chancellor of the Exchequer in the House of Commons on June 28, when he announced the introduction of the present interim arrangements involving the use of "D.O." (Defence Order) and "P.T." (Preferential Treatment) symbols.

The present arrangements for controlling the distribution of sheet steel, tinplate, terneplate and blackplate will remain unaltered.

A further announcement will be made about control over the distribution of alloy steel.

The new arrangements will be similar to those in operation up to May, 1950. As from December 3 no person will be allowed to acquire carbon steel in the forms listed below unless he has an "I.S." authorisation." These authorisations will be issued to firms to acquire specific quantities of steel for specific purposes. The authorisation will permit the firm to acquire the steel direct or allow the firm's sub-contractors to purchase steel to fulfil sub-contracts. These arrangements do not apply to building and civil engineering firms, who will receive a notice from the Ministry of Works telling them how to apply for the steel they need. There will be other variations from the general procedure similar to those that existed before.

Firms which formerly received I.S. authorisations will shortly be asked by the appropriate Department to send in applications for allocations of carbon steel. Ministry of Supply Regional Controllers will ask firms who formerly received I.S. authorisations from Regional Offices to apply to them.

Any steel-using firm, except a sub-contractor, which will be requiring carbon steel and has not had an authorisation before, should apply early in September as follows:—

1. If the firm requires more than 25 tons of steel a quarter it should apply to the Department which it normally contacts on matters of production.

2. If the firm uses 25 tons or less a quarter (including not more than 10 tons of sheet) it should apply to the Ministry of Supply Regional Controller.

In cases of doubt application should be made to the Ministry of Supply, Iron and Steel Division, Shell Mex House, Strand, W.C.2.

I.S. authorisations will not be needed to buy small quantities of carbon steel (one ton a quarter or less according to the form of steel). Full details of these exemptions for small quantities will be issued later.

Iron and steel stockholders will again need licences to acquire controlled types of steel for resale. Stockholders who previously had licences will be told direct what action to take. Iron and steel stockholders established since May, 1950, should write for a licence to Ministry of Supply, Iron and Steel Division, Shell Mex House, Strand, W.C.2.

These arrangements apply to the following types of carbon steel:—

Ingot; billet, bloom, slab; tinplate bar, sheet bar; plate; angle, channel, tee, joist, piling section and other sectional material; round, rod, square, hexagon, flat, other section and shape (and whether black or bright); rail, sleeper, fishplate, soleplate; hoop, strip (and whether coated or uncoated, and whether hot or cold rolled); tube, pipe; tyre, axle, wheel; block for forging, block for pressing, forging, drop forging; colliery arch and accessories therefor, pit prop; any spring whether laminated, volute or coil, made either of round rod of not less than ⅜ in. diameter or other steel material of a corresponding cross sectional area; wire rod; coated or uncoated wire (whether plain or barbed); wire rope, wire strand.

The necessary Statutory Instrument will be issued as soon as possible.

# FOREMANSHIP TRAINING IN THE BUILDING INDUSTRY

## Details of Courses

SINCE the publication in 1948 of a report on the training of General Foremen in the Building Industry, courses in foremanship have been started in over 45 colleges in different parts of the country. One of the difficulties in running these courses has been the shortage of suitably trained men to act as lecturers, and many builders, foremen and others not normally accustomed to this kind of work have helped the colleges as part-time lecturers during the initial periods of the various schemes.

To assist lecturers, the committee which prepared the original report also drafted and issued some notes for guidance. In the light of experience gained, these notes have now been revised by the Standing Committee for the Training of General Foremen and have been published by the National Federation of Building Trades Employers in the form of a booklet. They are designed for use in connection with the syllabus for general foremanship courses given in the 1948 report and indicate points which might usefully be covered in each lecture. They also suggest how formal lectures may be supplemented by practical work and discussions.

The Notes, price 9d., post free, are obtainable from the Secretary, Standing Committee for the Training of General Foremen, 82, New Cavendish-street, London, W.1.

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# ENGINEERING, MARINE AND WELDING EXHIBITION

## Display of British Skill

A NUMBER of the latest products of British engineering skill will be on view at the Engineering, Marine and Welding Exhibition which is to be held at Olympia from August 30 to September 13.

STEWARTS AND LLOYDS, LIMITED, with associated and subsidiary companies, are exhibiting a selected range of their products. For the first time at a public exhibition, S and L electric resistance weld boiler tubes (manufactured to B.S. 1654) are on show. Tubes made by this process are claimed to be equal to and, in some respects, superior to seamless tubes, and have been approved in Lloyd's Register of Shipping and the Ministry of Transport for use in both smoke and water tube boilers. The fine surface finish of these tubes makes them particularly suitable for use in boilers. By a novel arrangement of lights and mirrors, the E.R.W. exhibit allows a close examination of the interior finish.

TUBEWRIGHTS, LIMITED, the S and L subsidiary specialising in the design and manufacture of tubular steel structural work, have two exhibits showing welding technique, consisting of samples drawn at random from their production run, to illustrate the normal standard of their products, and a display of tubular steel "Tripoles," with cross arms and insulators, for power transmission, devised primarily for the export market.

MESSRS. G. A. HARVEY AND CO. (LONDON), LTD., are showing, among numerous other exhibits, a range of perforated metals, in artistic patterns, selected for such items as radiator covers, pipeguards and ventilating grilles. Wirework of various kinds for domestic and industrial needs are also featured, and amongst the numerous productions shown are machinery guards, radiator covers, pipe guards, lift enclosures, partitions, baskets and carriers for many manufacturing processes.

The firm has placed on the market mild steel rainwater goods manufactured to B.S.S. 1091-1946, and the high standard of rainwater goods demanded by the specification is made clear from exhibits on this stand.

THE RAWLPLUG COMPANY, LIMITED, will be showing their extensive range of fixing devices and tools. Of these Rawlplugs are as well known as screws and bolts for firmly fixing anything from light wiring to heavy equipment. What may not be so well known are the metal expansion bolts which save so much time in fixing down machinery.

These Rawlbolts are made in two types and constitute an inner bolt with an outer shell made of four segments. A hole to receive the bolt is bored in the material with a masonry tool such as a stardrill or durium drill, and the bolt dropped in. On tightening, the action is to draw a wedged shaped nut into the shell thus forcing the segments against the side of the hole until they are tight. The strength of the fixing is as great as the strength of the material or the bolt, whichever is the weaker. As there is no grouting in or waiting for cement to dry, machinery can be put into operation as soon as fixed.

KEITH BLACKMAN, LIMITED are showing different types of apparatus designed for ventilating factories, public buildings, mines and ships. Among the exhibits is an air conditioning unit for cleansing, warming or cooling, and either drying or moistening, the

air supply for theatres, public or private buildings and industrial establishments. Among other units shown is one for dust exhaustion and collection in industrial buildings where dust is created by processes such as grinding, polishing, scurfing, etc. Other fans are shown for ordinary ventilation purposes.

## LONDON WORKING RULE

### New Decisions

THE London Master Builders' Association, in their Information Service, publish the following notes on the working rule agreement as it affects the London area:—

*Variation Amendments.*—The Regional Joint Committee, at its meeting on March 20, 1951, dealt with a number of Variation Amendment Proposals received from the Operatives' Federation. It was agreed that in three cases joint recommendations should be submitted to the National Joint Council for amendment of the London Working Rule Agreement, and on the remaining proposals the committee failed to agree. Upon some of these the Operatives' Federation appealed to the National Joint Council.

Notification has now been received from the National Joint Council that the operatives' appeals have been rejected, but that the joint recommendations have been approved.

The following amendments to the London Working Rule Agreement will therefore go into operation on and after October 1, 1951:—

London Working Rule 3B(c). Substitute: "Masons and Mason Paviors employed whole time on the working of granite (to include the working of granite for kerbs and setts), 1d."

London Working Rule 3C(c). Substitute: "Masons and Mason Paviors while working on granite (to include the working of granite for kerbs and setts), 1d."

London Working Rule 5. Night Work. Paragraph 3. Substitute: "Where men, other than those employed during the day time, work at night for fewer consecutive nights than prescribed in the Night Gang Rule, the overtime rates payable shall be: First two hours worked, time and a quarter; second two hours worked, time and a half; afterwards, double time, provided that all hours worked after midnight shall be paid at double time, and all hours worked after 10 p.m. at not less than time and a half."

## OFFICIAL NOTIFICATION

### Nickel Plating

The Ministry of Supply and Board of Trade announce that, following representations by industries affected by the Nickel (Prohibited Uses) Orders, it has been decided that the date from which the nickel plating of articles listed in the Second Schedules to the Orders will be prohibited, shall be October 1, 1951, instead of August 22, 1951.

It has also been decided that the disposal of articles containing controlled material or which are nickel plated shall be permitted without licence up to December 31, 1951. Under the present Orders disposal was prohibited after October 1 and August 22 respectively.

These changes are being made to allow manufacturers more time to turn over to alternative methods of production and to dispose of existing stocks.

Amending Orders giving effect to these decisions were issued on August 21.

## REGRADING OF DISTRICTS

### Announcement by N.J.C.

The following is the List of Regradings as authorised by the National Joint Council for the Building Industry to take effect on and from October 1 next.

#### MIDLAND REGION

| | |
|---|---|
| Bromsgrove R.D. (part—i.e. Belbroughton, Clent, Frankley and Romsey and Hunnington) | A2 to A |
| Lichfield M.B. | A1 to A |
| Grantham M.B. | A1 to A |
| Matlock U.D. | A1 to A |
| Ashbourne R.D. (part—i.e. Hartington Town Quarter, Hartington Nether Quarter, Eaton and Alsop, Parwich, Ballidon, Aldwark, Ible, Brassington, Carsington, Hopton and Griffe Grange, Fenny Bentley, Thorpe, Tissington, Snelston, Callow, Hognaston, Lea Hall, Kniveton, Bradbourne, Newton Grange, Mapleton, Offcote and Underwood, Bradley, Yeldersley, Osmaston, Edlaston and Wyaston, Atlow, Kirk Ireton, Biggin, Hulland, Hulland Ward, Shirley) | A3 to A2 |
| Ashbourne U.D. | A3 to A2 |
| Bishops Castle M.B. | A3 to A2 |
| Clun R.D. | A3 to A2 |
| East Elloe R.D. | A3 to A2 |
| East Kesteven R.D. | A3 to A2 |
| Leek R.D. (part—i.e., Alstonsfield, Ilam and Wetton) | A3 to A2 |
| Ludlow M.B. | A3 to A2 |
| Ludlow R.D. | A3 to A2 |
| Shipston-on-Stour R.D. | A3 to A2 |
| Tenbury R.D. | A3 to A2 |
| West Kesteven R.D. (part—i.e. Allington, Ancaster, Carlton Scroop, Caythorpe, Claypole, Dry Doddington, Fenton, Foston, Fulbeck, Honington, Hough-on-the-Hill, Long Bennington, Normanton, Stubton, Westborough) | A3 to A2 |
| Uttoxeter R.D. (part—i.e., Bramhall, Kingston, Marchington, Ellastone, Mayfield, Rocester, Uttoxeter Rural, Okeover, Stanton) | A3 to A2 |

#### SOUTH WALES REGION

| | |
|---|---|
| Borough of Carmarthen | A2 to A1 |
| Borough of Brecon | A2 to A1 |
| Milford Haven U.D. | A2 to A1 |

#### NORTH WESTERN REGION

| | |
|---|---|
| Millom | A2 to A |
| Knutsford | A1 to A |
| Montgomeryshire (County of) | A3 to A2 |
| Holyhead U.D. (Anglesey) | A3 to A2 |
| Llangefni U.D. (Anglesey) | A3 to A2 |
| Cumberland Border R.D. | A3 to A2 |
| Wigton | A3 to A2 |

#### SOUTHERN COUNTIES REGION

| | |
|---|---|
| Brighton | A1 to A |
| Bournemouth (including Christchurch and Poole) | A1 to A |
| Basingstoke | A2 to A1 |

#### EASTERN COUNTIES REGION

| | |
|---|---|
| Bury St. Edmunds | A3 to A1 |
| Harwich (including Dovercourt and Shotley Point) | A1 to A |
| King's Lynn | A2 to A1 |
| Stowmarket | A3 to A1 |
| The other Districts in the Eastern Counties Region at present in Grade A3 (General Grade) to be regraded | A2 |

#### YORKSHIRE REGION

| | |
|---|---|
| Filey U.D. | A1 to A |
| Barton-on-Humber, U.D. | A2 to A1 |
| Skipton U.D. | A1 to A |
| Driffield R.D. (part—i.e., Parish of Kirkburn including Driffield Aerodrome) | A3 to A1 |

#### SOUTH WESTERN REGION

| | |
|---|---|
| Bridgwater | A2 to A1 |
| Yeovil | A2 to A1 |
| Purton and Stratton St. Margaret (and to be included in Swindon Graded District, the district to be described as follows: "Swindon district (comprising Swindon, Blunsdon St. Andrew, Chisledon, Haydon Wick, Liddington, Lydiard Millicent, Lydiard Tregoze, Purton, South Marston, Stanton Fitzwarren, Stratton St. Margaret, Wanborough and Wroughton)") | A2 to A1 |
| Cheltenham | A1 to A |
| Gloucester | A1 to A |
| Lyneham (Devon) | A1 to A2 |

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## NATIONAL INSURANCE CARDS

### Procedure on Discharge of Operatives

The London Regional Joint Committee for the Building Industry has recently received reports that difficulties have arisen owing to the fact that operatives who have been discharged have not been able to take their National Insurance Cards with them and have thus found difficulty in obtaining fresh employment.

It is appreciated that there may frequently be administrative difficulties which prevent a man's cards being handed to him at the actual time of discharge, but the committee nevertheless desires particularly to draw the attention of all concerned to (a) the need for employers to hand all cards to an operative immediately on his discharge, or as soon as possible thereafter; (b) to the need for operatives to bring their cards with them whenever possible, when applying for employment, and (c) that when it is impossible for a man to be given his cards at the time of discharge, it will considerably assist him in obtaining fresh employment if he is given a card signed by his employers (such as is provided by the L.M.B.A. for their members), indicating the date and time of his discharge and that his cards are being forwarded to him as soon as possible.

### Death of Mr. W. J. Negus

W. and M. Negus Ltd. announce with great regret the sudden death, on August 13, of Mr. William J. Negus, a director of the company and founder of the business, at the age of 86.

# FIRE RESEARCH IN 1950

## High Safety Factor of Post-war Traditional Houses

"FIRE RESEARCH, 1950," the annual report of the Joint Fire Research Organisation, has been published by the Stationery Office (price 2s. 6d.) for the D.S.I.R. and the Fire Offices Committee. The report contains details of investigations of fire hazards in homes, industrial buildings and warehouses, and of improved methods of fire fighting.

Smoking materials are responsible for more than 4,000 fires in buildings yearly, says the report. Well over 2,000 fires a year are caused by children playing with matches. The principal cause of house fires is the open fire, which is responsible for more than 7,000 a year.

Fires in buildings are the cause of 42,000 of the 72,000 calls which are answered by fire brigades every year.

Continued experience of fires in post-war buildings, backed by laboratory studies and experimental fires, has shown that some of the new forms of light construction can be used to give that degree of personal safety which long experience of traditional forms of building has shown to be acceptable; the importance of the close association of research with the design of new buildings is clearly indicated.

### Fires in the Home

The statistical work on reports of fires which occurred in houses and flats during the four years 1946-9 has been reviewed for the Ministries of Health and Works. In Table 1, here reproduced, a comparison is made of the rates of incidence of all sizes of fires and also of serious fires (those damaging more than half a dwelling) in pre-war dwellings and the corresponding rates in the three different types of post-war dwellings for each of the four years considered; the rate of incidence of fires is defined as the number of damaged dwellings per 10,000 dwellings at risk per year.

An outstanding feature of Table 1 is the low rate of incidence of fires in post-war traditional houses as compared with the other types of dwellings. Whilst the rates of incidence of all sizes of fires in post-war temporary and permanent non-traditional dwellings have been less than those in pre-war dwellings, the rates of incidence of serious fires have been greater.

### Protective Treatments

A number of tests of proprietary forms of construction and of protective treatments for combustible wall surfaces were examined on behalf of manufacturers.

A comparative examination of the results of all the tests so far made in this country on timber beams and floors, including many which were made by the Building Research Station before the formation of the Joint Fire Research Organisation, has led to the development of a formula that will give, with reasonable accuracy, the fire endurance of any common size of timber joist under specified loading conditions.

Studies of the ignition of combustible materials and the spread of flames over their surfaces, and of the effect of treatments in retarding these processes, have continued. The data obtained are being used to develop improved small-scale tests which can be used by manufacturers for experimental work in the factory.

TABLE 1.—RATE OF INCIDENCE OF FIRES ATTENDED BY THE N.F.S. AND FIRE BRIGADES IN OCCUPIED DWELLINGS IN GREAT BRITAIN, 1946-9

| Type of dwelling | Year | Equivalent number of dwellings at risk (thousands) | Damaged dwellings | | Number of damaged dwellings per 10,000 dwellings at risk per year | Number of seriously damaged dwellings per 10,000 dwellings at risk per year |
|---|---|---|---|---|---|---|
| | | | Total number | Number seriously damaged | | |
| PRE-WAR ... ... ... | 1946 | 12,000 | 15,180 | 628 | 12.7 | 0.5 |
| | 1947 | 12,000 | 16,849 | 414 | 14.0 | 0.3 |
| | 1948 | 12,000 | 16,686 | 344 | 13.9 | 0.3 |
| | 1949 | 12,000 | 19,148 | 340 | 16.0 | 0.3 |
| POST-WAR | | | | | | |
| Temporary ... ... ... | 1946 | 36 | 34 | 6 | 9.5 | 1.4 |
| | 1947 | 110 | 105 | 10 | 9.5 | 0.9 |
| | 1948 | 149 | 154 | 13 | 10.4 | 0.9 |
| | 1949 | 157 | 195 | 16 | 12.5 | 1.0 |
| Permanent non-traditional ... | 1946 | —* | 2 | — | —* | —* |
| | 1947 | 11 | 10 | 1 | 9.1 | 0.9 |
| | 1948 | 57 | 71 | 8 | 12.6 | 1.4 |
| | 1949 | 118 | 130 | 18 | 11.0 | 1.5 |
| Permanent traditional ... | 1946 | —* | 5 | — | —* | —* |
| | 1947 | 100 | 38 | 1 | 3.8 | 0.1 |
| | 1948 | 248 | 61 | — | 2.5 | — |
| | 1949 | 407 | 101 | — | 2.5 | — |

* Figures for number of post-war permanent houses occupied by families are not available for 1946 and it is therefore impossible to calculate the equivalent number of dwellings at risk.

A number of tests with various types of water sprays showed that the efficiency of the sprays depended on the size of the drops produced in them. Improved equipment for producing drops of the most effective size has been developed.

Investigation has been made of special industrial hazards. There has been close collaboration between the Joint Fire Research Organisation and the Factory Department of the Ministry of Labour and National Service.

Experimental work has been carried out on particular hazards which have come to the notice of the Factory Department. Two of these have been the hazard of tanks or drums which have contained inflammable liquids which do not appear to have been regarded as dangerous in some sections of the industries concerned; and the possibility of sparks being caused by the use of certain kinds of aluminium paint on rusty iron.

Experience of large fires in basements has led to the conclusion that only a limited use can be found for the most powerful smoke extractors when fighting fires of this sort.

Fire-resistance tests have been carried out on a number of constructional and decorative materials, including lightweight plasters and cements, precast slabs, nitrocellulose lacquers, plastic materials and plastic and rubber-insulated cables.

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## CARPENTER TO BE REINSTATED

### A Wolverhampton Case

THE APPLICATION of a carpenter, aged 20, to be reinstated in his work with an Ettingshall, Wolverhampton, firm of builders was granted on August 16 by the Birmingham Reinstatement Committee, and the applicant was awarded compensation.

Brian B. Porter, a married man with one child, of Wolverhampton, started work for Biddulph and Thrift, Ltd., in January, 1949, as carpenter-improver. In July of the same year he was called up for the Army. He was discharged in July this year. On applying for his job in person and by letter, he was informed that there was no vacancy.

Mr. Biddulph, a partner in the firm, told the committee that recently many carpenters had been laid off owing to lack of work. A contract for 50 flats was held up for lack of materials. He could not take Porter back now, although he would probably be able to do so in the future.

The committee announced that Porter would have to be reinstated and paid compensation at the rate of £6 10s. a week; allowing for money he had earned at another job, that would amount to £22.

## R.I.C.S.

### Professional Examinations

THE Royal Institution of Chartered Surveyors have now issued their pass lists for the Professional Examinations, 1951. Winners of Special Prizes are:—

Penfold Gold Medal, Driver Prize and Mellersh Prize: M. S. Argles (Newark); Penfold Silver Medal: A. J. P. Trew (Gloucester); Special Prize: L. D. C. Roberts (Miss) (Kent); Wainwright Prize: J. C. Bassett (London); Galsworthy Prize: K. H. Jones (Essex); Institution Prize: P. J. Devers (Middlesex); Beadel Prize: A. J. Newell (Northants).

John Gilchrist Prize: I. B. Matheson (Glasgow); Crawter Prize: shared between R. A. Garner (Kent) and I. B. Matheson (Glasgow); Quantities Prize: E. F. Maynard (London); Constructive and Working Drawings Prize: A. Russell (Middlesex); R. Irwin Barr Prize: A. J. Martin (Glasgow); Hyman Marks Prize: shared between L. G. Higgins (Yate, Nr. Bristol) and J. G. Woodnutt (London); Julian Rogers Prize: R. Borland (Glasgow).

## CENTRAL LAND BOARD

### Development Charge Assessments

THE annual report of the Central Land Board for the financial year ended March 31 (Stationery Office, 9d.) states that by the end of the year the Board had determined 197,214 claims against the £300m. set aside for loss of development values under the Town and Country Planning Act, 1947. The Board state that 39 per cent. of these were "nil" valuations, and that there has been a tendency for the smaller and simpler claims to be settled first. The total number to be valued is about 825,000. Payments towards professional fees incurred by claimants amounted to £702,998.

Of 76,152 applications to the Board to assess development charge, 36,813 (47 per cent.) were found to be exempt or to attract a "nil" charge. The Board received £3,159,492 in development charges in 14,992 cases, compared with £2,084,616 in 16,511 cases during the previous year, and £1,295,924 was set off against claims.

The Board point out that a prospective developer is penalised unless he can buy land at existing use value. Sales at or near existing use value still appear to be more the exception than the rule, due largely to the scarcity of building licences.

Particular attention is drawn to the fact that local authorities have powers to buy housing land at existing use value for resale to private developers. "We co-operate," the Board say, "with authorities who desire to meet in this way the needs of those to whom they have allotted, or hope to allot, building licences."

The Board report having made 10 compulsory purchase orders during the year, and say that applications to them to make orders were on a smaller scale.

### Employment in Building Industry

During June there was an increase of 15,000 in the number of persons employed in the building and contracting industries in Great Britain, bringing the total up to 1,449,000, according to figures issued by the Ministry of Labour and National Service. In the same month the total working population increased by 35,000 (11,000 men and 24,000 women).

## NEWS IN BRIEF

### Stock Bricks at Lansbury

Messrs. Eastwoods, Ltd., 158-160, City-road, E.C.1, inform us that the Stock Brick Manufacturers' Association supplied some three million bricks to the various buildings comprising the "Live Architecture" exhibition at Lansbury, an illustrated progress report on which appeared in our last issue.

### An Appointment

Following his work as co-ordinating architect for the South Bank Exhibition, Mr. Misha Black, O.B.E., director of Design Research Unit, has been appointed to advise B.O.A.C. on the design of the equipment which will be housed in their central maintenance base now being constructed at London Airport.

### The South Bank Buildings

It was announced on Monday that the Festival of Britain authorities had already received inquiries about the disposal of buildings, including the Dome of Discovery and the Skylon at South Bank, and those at other exhibitions from people and organisations who wish to make use of them when the Festival is over. There have been similar inquiries about display material and exhibits that are not on loan. While no decision has been made, many of the buildings and much of the other material will become available for disposal. Applications from those interested should be sent to the Disposals Branch, Festival of Britain, 99, Regent-street, W.1.

### Sulphuric Acid Factory

A new company, to be known as the United Sulphuric Acid Corporation, has been formed to manufacture sulphuric acid in this country from anhydrite, which is to be supplied by the British Plaster Board Company from a new mine in Scotland. A factory is to be built at Widnes for which, it is understood, the Government will grant priority. The problem of disposing of cement clinker, a major by-product, is being covered by an agreement with the Associated Portland Cement Company, which is building a new cement works at Widnes. In addition to producing 150,000 tons of acid, the process will yield about 140,000 tons of cement a year.

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## NEW COMPANIES

THE FOLLOWING NEW COMPANIES, registered in England, have been announced by Jordan and Sons, Ltd., company registration agents.

Holly Tree Estates, Ltd. (495585.) Regd. May 19, Holly Tree-hse., Heronsgate-rd., Chorleywood, Herts, bldrs., bricklayers, etc. Nom. cap.: £10,000. Dirs.: R. G. W. Hewitt and Mrs. M. T. Hewitt.

Howard and Cawood (Tadcaster), Ltd. (495587.) Regd. May 19, The Britannia Yard, Commercial-st., Tadcaster, Yorks. Nom. cap.: £2,000. Dir.: W. Howard, 42, Auster Bank-rd., Tadcaster.

C. Burton (Joiner), Ltd. (495623.) Regd. May 21, 5, Allerton-pl., Halifax. Nom. cap.: £2,000. Dir.: C. Burton, 8, Apple-st., Lister-La., Halifax.

H. Richardson, Son and Hillman, Ltd. (495721.) Regd. May 23, 152, Hoe-st., Walthamstow, E.17, bldrs. and contractors, etc. Nom. cap.: £100. Dir.: H. R. Richardson, 59, Babington-rd., Dagenham.

Ventalock (Blackpool), Ltd. (495797.) Regd. May 24, Ventalock-hse., Preston-rd., Lytham, bldrs., etc. Nom. cap.: £3,000. Dir.: B. Everett, 37, King Edward-ave., Blackpool.

J. Murphy (Sittingbourne), Ltd. (495763.) Regd. May 24, 152, Hoe-st., Walthamstow, E.17, bldrs. and contractors, etc. Nom. cap.: £100. Dirs.: J. W. F. Murphy and Mrs. S. J. Murphy, 24, Homewood-ave., Sittingbourne.

C. Bartlett, Ltd. (495704.) Regd. May 23, 3, Falmer-rd., Enfield, bldrs., decorators, etc. Nom. cap.: £1,000. Dir.: C. Bartlet

P. L. Back and Sons, Ltd. (495811.) Regd. May 25, Belle Vue, Cawston-la., Dunchurch, nr. Rugby, bldrs., contractors, etc. Nom. cap.: £4,000. Dirs.: F. L. Back and Edith M. Back.

Berks Surfaces (Newbury), Ltd. (495847.) Regd. May 26, 27, Wendan-rd., Newbury, road contractors. Nom. cap.: £1,000. Dir.: A. P. Yeoman.

Grosvenor Park Builders, Ltd. (495860.) Regd. May 26, 45a, Grosvenor-pk., S.E.5. Nom. cap.: £100. Dir.: H. A. Terry, 20, Deerdale-rd., Herne Hill, S.E.24.

T. Osmond and Sons, Ltd. (495940.) Regd. May 29, 91a, Lower-rd., Rotherhithe, S.E.16, bldrs., etc. Nom. cap.: £100. Dir.: Florence J. Osmond, 1, Southbourne-gdns., Eastcote, Ruislip, Mdx.

Moultons Construction Co., Ltd. (495947.) Regd. May 29, 48, High-st., Tunstall, Stoke-on-Trent, bldg. contractors. Nom. cap.: £2,000. Dir.: W. Moulton, 139, Crewe-rd., Alsager, Ches.

Adkins and Cooper, Ltd. (495948.) Regd. May 30, Staverton, Daventry, Northants., bldrs. and contractors, etc. Nom. cap.: £4,000. Dir.: J. O. Adkins.

Cannon and Roaf, Ltd. (495983.) Regd. May 31, William-st., Carshalton, Surrey, bldrs. and decorators, etc. Nom. cap.: £4,000. Dir.: J. W. Cannon, 162, Sherwood Park-rd., Mitcham, Surrey.

T. H. Waghorn, Ltd. (496036.) Regd. May 31, bldrs., contractors, etc. Nom. cap.: £2,000. Dir.: T. H. Waghorn, 25, Lushington-rd., Harlesden, N.W.10.

H. Pridgeon and Co., Ltd. (496064.) Regd. June 1, 9, Kersley-st., S.W.11, contractors, bldrs., decorators, etc. Nom. cap.: £100. Dir.: W. H. Way, "Thurelcomb," Oxshott Rise, Cobham, Surrey.

Page and Son (Contractors), Ltd. (496074.) Regd. June 1, The Mews, Aboyne-rd., Tooting, S.W.17, bldrs. and contractors. Nom. cap.: £2,000. Dir.: F. P. Page, 32, Bertal-rd., Tooting, S.W.17.

Willow Construction Co., Ltd. (496136.) Regd. June 2, 30, Pancras-rd., King's Cross, N.W.1, builders, etc. Nom. cap.: £1,000. Dir.: Mrs. V. B. Burlow, 39, North Side, Clapham Common, S.W.4.

Morris, Oldfield and Co., Ltd. (496118.) Regd. June 2, Southroyds, Doncaster-rd., Oldcotes, nr. Worksop, bldrs., bldg. contractors, etc. Nom. cap.: £3,000. Dir.: H. Morris, 1, Kingsway, Worksop.

R. J. Norris and Co. (Builders), Ltd. (496125.) Regd. June 2, 7, Palmerston-st., Camberwell, S.E.5. Nom. cap.: £1,000. Dir.: R. J. Burton, 13, Palmerston-st., S.E.5.

W. E. Owen (Builders and Contractors), Ltd. (496132.) Regd. June 2, Elmhurst Villa, Brookhouses, Cheadle, Staffs, bldr., etc. Nom. cap.: £3,000. Dirs.: W. E. Owen and Mrs. E. M. Owen.

A. G. Conway, Ltd. (496141.) Regd. June 4, 50a, Chislehurst-rd., Orpington, Kent, bldrs., bricklayers, etc. Nom. cap.: £1,000. Dir.: A. J. Tatham, 154, Spur-rd., Orpington.

Arthur J. Tatham (Builders), Ltd. (496143.) Regd. June 4, 204, High-st., Orpington, Kent. Nom. cap.: £10,000. Dir.: A. J. Tatham, 154, Spur-rd., Orpington.

Stephenson Oliver (Builders), Ltd. (496227.) Regd. June 6, 2, Witbank-gdns., Shanklin, I.W. Nom. cap.: £2,000. Dir.: W. F. Spanner, 95, High-st., Ventnor, I.W.

J. W. Bonarius, Ltd. (496187.) Regd. June 5, 716, Old Ford-rd., Bow, E.3, bldrs. and contractors, etc. Nom. cap.: £500. Dirs.: J. W. Bonarius and Lilian A. Bonarius, 13, Preston-rd., Leytonstone, E.11.

W. E. Jones (Contractors), Ltd. (496202.) Regd. June 5, 105, Lewin-st., Middlewich, Ches, bldr. and contractor. Nom. cap.: £5,000. Dirs.: W. E. Jones and Barbara Jones, Linden Lea, Congleton-rd., Sandbach.

M. and M. Builders, Ltd. (496258.) Regd. June 7, 17, Oxendon-st., Haymarket, S.W.1. Nom. cap. : £1,000. Dir. : Marjorie E. Corner, 173, Church Hill-rd., Cheam, Surrey.

W. Gymer, Ltd. (496325.) Regd. June 8, bldrs and contractors, etc. Nom. cap. : £2,500. Dirs. : A. J. Gymer, 189, Woodford-ave., Ilford, Essex.

Isaac Berriman, Ltd. (496306.) Regd. June 8, The Woodlands, Fence Houses, Co. Durham, bldrs., contractors, etc. Nom. cap. : £4,500. Dir. : A. Berriman.

Sainsbury and Evans, Ltd. (496317.) Regd. June 8, 3, Penywain-rd., Roath-pk., Cardiff, bldrs., bldg. contractors, etc. Nom. cap.; £1,000. Dir. : H. G. Sainsbury.

C. A. W. Blunt and Co., Ltd. (496371.) Regd. June 11, Heathfields, Royston, Herts, bldrs., bldg, public works and genl. contractors, etc. Nom. cap. : £2,000. Dir. : C. A. W. Blunt.

E. P. Nunn, Ltd. (496417.) Regd. June 12, 187, West End-rd., Ruislip, Middx, bldrs., contractors and decorators., etc. Nom. cap. : £1,000. Dirs. : E. P. Nunn and Mary T. M. Nunn.

Jellings-Brudenell, Ltd. (496458.) Regd. June 13, 174/6, Cromwell-rd., Peterborough, bldrs., bldg. contractors, etc. Nom. cap. : £10,000. Dirs. : G. B. Brudenell and Mrs. V. E. Brudenell, 2, Orchard Way, Godmanchester, Hunts.

Johns Contractors, Ltd. (496432.) Regd. June 12, 14, Moreton-st., S.W.1, bldg. and decorative contractor. Nom. cap. : £2,000. Dirs. : J. W. Vodden and Mrs. E. D. Vodden, 77, Ellerton-rd., S.W.18.

Henry J. Sinclair, Ltd. (496494.) Regd. June 14, 39, Heaton-rd., Newcastle-on-Tyne, bldrs. and contractors, etc. Nom. cap. : £5,000. Dir. : W. A. Sinclair, 39, Cochrane Park-ave., Newcastle 7.

R. Y. Ames, Ltd. (496580.) Regd. June 16, 37/8, Strand, W.C., roofing contractors and specialists, etc. Nom. cap. : £2,000. Dir. : R. Y. Ames, 10, Grove Court, Drayton-gnds., S.W.10.

Holbeach Asphalte Co., Ltd. (496571.) Regd. June 16, Dormer-hse., West End, Holbeach, Spalding, Lincs., roofing, flooring contractors and specialists, asphalt contractors, etc. Nom. cap. : £1,000. Dir. : A. Campion, 28, Battlefields-la., Holbeach.

Maren Marble Co., Ltd. (496575.) Regd. June 16, 152, Trevelyan-rd., Tooting, S.W.17, stone masons, bldrs, bricklayers, etc. Nom. cap. : £2,000. Dirs. : B. Gough and Mrs. L. A. Gough.

R. Rollings and Co., Ltd. (496610.) Regd. June 18, Sundale-hse., Warmington, Northants., bldrs., contractors, etc. Nom. cap. : £1,000. Dir. : R. R. Rollings, 396, Fulbridge-rd., Peterborough.

H. Readman, Ltd. (496705.) Regd. June 21, 1, York-pl., Scarborough, bldg. and civil engng. contractors, property repairers, etc. Nom. cap. : £5,000. Dirs. : H. Readman and Mrs. C. Readman, 213, Scalby-rd., Scarborough.

# THE SCOTTISH BUILDER

## NEW BUILDINGS

**Airdrie.**—Plans in hand for factory at Carlisle-rd. for Messrs. Godfrey Phillips, Ltd., for which the architects are John Scot & Son, F.R.I.B.A., 10, Bank-st., Graham Cross, Airdrie.

**Coatbridge.**—Corporation to have plans prepared for scheme of 38 houses from plans by their own architect.

**Douglas.**—Plans to be prepared for new works and offices at Ringside, for which the architect is James S. Shannon, F.R.I.B.A., 45, High-st., Biggar.

**East Kilbride.**—Plans to be prepared for new office buildings for Messrs. John MacLean, for which the architects are Gavin Paterson & Son, A.R.I.B.A., 6, Cadzow-st., The Cross, Hamilton.

**Fifeshire.**—Plans in hand for 170 houses at Glenrothes, Markinch, for which the architect is Peter Tinto, A.R.I.B.A., Woodside, Glenrothes, Markinch.

**Glasgow.**—Plans to be prepared for Messrs. James Green for new bakehouse buildings, etc., at a Parkhead site. The architect is James Watson, 35, Quarryknowe-st., Glasgow, 6.

**Glasgow.**—Plans to be prepared for the Astoria Cinema, Ltd. for alterations and additions at Maryhill-rd., St. Georges Cross. The architects are Leanox & Paterson, F.R.I.B.A., 147, West Regent-st., Blythswood, Glasgow, W.C.2.

**Glasgow.**—Plans in hand for new canteen buildings to be erected for Messrs. Kennedy, MacLeod and Co., Ltd., at St. Vincent-cres. The architect is Magnus Duncan, F.R.I.B.A., 243, Eglinton-st., Eglinton Toll, Glasgow, S.2.

**Motherwell-Wishaw.**—Plans in the hands of their own staff of architects for additions at the works of Messrs. Colville, Ltd., 195, West George-st., Blythswood, Glasgow, W.C.2.

**Newmains.**—In the last paragraph in this column in our issue of August 10 last in which reference was made to a scheme of houses proposed by the Scottish Special Housing Association, Edinburgh, the name of the architect was wrongly given. The Secretary of the Association is at 19, Palmerston-pl., Edinburgh, 12.

**Stirlingshire.**—Plans to be prepared for scheme of new houses to be erected in Grangemouth at The North Basin site. The architect is Mr. James C. Wallace, Council-chbrs., Grangemouth.

# FUTURE CONSTRUCTION

## PUBLIC APPOINTMENTS

*Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.*

## CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

### BUILDING

#### AUGUST 25.

**Droxford R.D.C.**—18 houses at Swanmore. L. Bishop, Northbrook House, Bishop's Waltham, Southampton. Dep. £2 2s.

**Droxford R.D.C.**—12 houses at Curdridge. L. Bishop, Northbrook House, Bishop's Waltham, Southampton. Dep. £2 2s.

**Montrose T.C.**—44 houses at Murray-la. site. C.

#### AUGUST 27.

†**St. Asaph R.D.C.**—Eight houses and incidental works. F. C. Roberts, Earl-chbrs., Mold. Dep. £3 3s. Tenders by September 20.

#### AUGUST 30.

*†**Manchester Reg. Hos. Board.**—Erection and completion of new physiotherapy dept. at Preston Royal Infirmary, Deepdale-rd., Preston. Thomas Duffy, F.R.I.B.A., Sunlight-house, Quay-st., Manchester, 3. Tenders by September 20.

*†**Surrey C.C.**—Adaptations at King's Club, King's-rd., Richmond, to form clinic, divisional health office and ambulance station. County A.

#### AUGUST 31.

*†**Cambridge City.**—Classroom and lavatory accommodation, Open Air School, Ascham-rd. City E. & S. Dep. £2 2s.

**Chichester T.C.**—Two blocks of flats at Tower-st. Stanley H. J. Roth, 32, Little London, Chichester. Dep. £1 1s.

*Wednesfield U.D.C.—46 houses at Lichfield-rd. housing site. Thos. A. Peacock, M.I.Mun.E., E. & S., Pennhurst, 29, Bolton-rd., Wednesfield. Dep. £3 3s.

#### SEPTEMBER 1.

*†**Folkestone B.C.**—Re-roofing of six houses at Penfold-rd. B.E. Tenders by September 15.

#### SEPTEMBER 3.

*East Sussex C.C.—New school, Crawley. J. Catchpole (A.), County A., Lewes.

*Harrow U.D.C.—Alterations to parapet walls at (a) Stag-la. J.M. and I. sch., Edgware; and (b) Grimsdyke J.M. and I. sch., Hatch End. J. H. Melville-Richards, A.M.I.C.E., Council Offices, Stanmore. Dep. £2 (for each contract).

#### SEPTEMBER 4.

*Dudley C.B.—Eight cottages and two houses at Dudley Wood, Netherton. Boro' A., Priory Hall, Dudley. Dep. £2 2s.

*†**Southampton C.B.**—War damage and other repairs to Taunton school. Boro' A. Dep. £2. Tenders by October 8.


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**Stalybridge B.C.**—Eight houses at Hague Steps housing site. C. Dep. £2 2s.

#### SEPTEMBER 5.

*Cleethorpes Boro'.—12 houses, Davenport-dr. site. A. B. Cooper, B.E. Dep. £2 2s.

*Morecambe and Heysham B.C.—Ten houses at Blackberry Hall estate. B.S. Dep. £1.

*†**Wandsworth B.C.**—116 flats at Wendelsworth estate. R. H. Jerman, Municipal-bldgs., Wandsworth, S.W.18.

*†**West Sussex.**—One police house plus office and garage at Rake. County A., County Hall, Chichester.

#### SEPTEMBER 6.

**Liverpool T.C.**—672 dwellings at Kirkby estate. City A. and Director of Housing. Dep. £2 2s.

**Stratford-on-Avon R.D.C.**—41 houses at Wellesbourne. Francis W. B. Yorke and H. M. Barker, 36, Calthorpe-rd., Birmingham, 15. Dep. £2 2s.

#### SEPTEMBER 7.

*†**Plymouth T.C.**—Clearance of site and carrying out foundation works for first block of new technical college. H. J. W. Stirling, A.R.I.B.A., Seymour-rd., Plymouth.

#### SEPTEMBER 8.

*West Ham C.B.—Ten houses at Earlham-gr., E.7. Thomas E. North, F.R.I.B.A., 70, West Ham-la., E.15. Dep. £2 2s.

#### SEPTEMBER 10.

*Cheshunt U.D.C. — Re-roofing of Isolation Hospital, Dig Dag Hill. E. & S. Dep. £2.

*Chester R.D.C.—12 houses at Barrow. T. C. R. Eaton, A.R.I.B.A., 16, White Friars, Chester. Dep. £3 3s.

**Newcastle-upon-Tyne T.C.**—Erection of maternity and child welfare section of the proposed health centre in Springfield-rd. on the Blakelaw estate. City A., 18, Cloth-market, Newcastle-upon-Tyne, 1.

*Southend-on-Sea.—Erection and completion of junior section of Temple Sutton prim. sch. at Eastern-ave. Boro' A. Dep. £2.

*Southend-on-Sea C.B.—Erection and completion of proposed catering unit at Municipal College. Boro' A. Dep. £2.

*Swadlincote U.D.C.—42 houses, Hartshorne estate. E. & S., Bank House, Midland-rd. Dep. £2 2s.

*Tadcaster R.D.C.—(a) Four houses at Acaster Malbis, and (b) four houses at Healaugh. A. Wellings, Council Offices. Dep. £2 2s. (each scheme).

#### SEPTEMBER 11.

**Bridge-Blean R.D.C.**—68 houses at Broad Oak housing site, Sturry, near Canterbury. Building Surveyor, Council Offices, Old Dover-rd., Canterbury. Dep. £2 2s.

**Brighton C.B.**—(a) One pair of police houses at Selham-cl. (Parkside estate); (b) one pair of police houses at Carden Hill (Hollingbury estate). E. & S., 26-30, King's-rd., Brighton. Dep. £1 1s. in each case.

*Depwade R.D.C.—Erection of brick dwellings at three sites. A. F. Scott & Sons (FF.), 23, Tombland, Norwich. Dep. £2 2s.

*Southend-on-Sea C.B.—Erection and completion of bungalows, old persons' and single persons' dwellings at housing sites Nos. 5, 6 and 13. B.E. & S. Dep. £2.

#### SEPTEMBER 12.

*Accrington B.C.—Provision and erection of new entrance doors to Market Hall. B.E. & S. Dep. £1 1s.

†**Bath T.C.**—Rebuilding 19 of the war-damaged Kingsmead flats. T.C.

**Brighton C.B.**—Erection of factory at Hollingbury Light Industrial Area. D. J. Howe, M.Inst.C.E., 26-30, King's-rd., Brighton. Dep. £3 3s.

*Howden R.D.C.—12 houses, Gulberdyke, four at Laxton, four at Broomfleet and 16 at Howden. J. H. Blenkinsopp, Clifton-chbrs., Park-st., Selby. Dep. £2 2s.

*Nottingham T.C.—Erection in prefabricated construction of Infants' and Junior Schools at Greencroft, Clinton. R. M. Finch, M.I.C.E. Dep. £2.

**Nottingham T.C.**—Construction of infants' school at Sneinton Boulevard. R. M. Finch, O.B.E., M.Inst.C.E., City E. & S., Guildhall. Dep £2.

**Thingoe R.D.C.**—Houses and bungalows, together with site works. J. H. Warren, 1, Northgate-st., Bury St. Edmunds. Dep. £2 2s.

#### SEPTEMBER 13.

*Glasgow Corpn.—267 flats at Berryknowes-rd. Director of Housing, 20, Trongate, Glasgow, C.1. Dep. £3 3s.

#### SEPTEMBER 14.

*Barnes B.C.—Erection of outbuildings at Chertsey Court, Mortlake. E. & S.

Maldon B.C.—12 bungalows at Beeleigh. B.E. Dep. £2 2s.

#### SEPTEMBER 15.

*Durham T.C.—12 houses at Church-st. housing site. City Engineer and Architect. Dep. £2 2s.

*Egham U.D.C.—Alterations and additions to Literary Institute, High-st. E. & S., Fire Station bldgs., High-st. Dep. £2 2s.

**Monmouth R.D.C.**—Eight houses at Raglan. J. H. Thraves, L.R.I.B.A., 63, High-st., Newport. Dep. £3 3s.

**Petworth R.D.C.**—19 houses at Northchapel. Godman and Kay, 12, North Parade, Horsham. Dep. £2 2s.

***Uttoxeter U.D.C.**—Erection of offices for Surveyor's Dept. E. & S. Dep. £2 2s.

***Wokingham R.D.C.**—Erection of eight garages at King Street-la., Winnersh. Eric G. V. Hives, L.R.I.B.A., 3, Cork-st., Reading. Dep. £2 2s.

**SEPTEMBER 17.**

**Brighton C.B.**—Public convenience for men and women at Blakers Park. E. & S., 26-30, King's-rd., Brighton. Dep. £2 2s.

**Cosford R.D.C.**—14 dwellings at Wattisham-rd., Bildeston. E. Fincham, 9, Palmers-ave., Grays, Essex. Dep. £2 2s.

***Cuckfield R.D.C.**—36 dwellings at Hurstpierpoint, Sussex. A. Hutchings, M.I.Mun.E. Dep. £2 2s.

***East Ham C.B.**—Erection of ambulance station at Wellington-rd. B.E. Dep. £2 2s.

**Oldham C.B.**—Conversion of Nonconformist chapel to crematorium. Sanger and Rothwell, AA.R.I.B.A., York-chbrs., 40, Yorkshire-st., Oldham. Dep. £2 2s.

***Salford T.C.**—33 flats at Devonshire-rd., Eccles Old-rd. City Engineer's Office. Dep. £3 3s.

**SEPTEMBER 18.**

***Bournemouth C.B.**—(a) 24 houses, and (b) four bungalows at Stourfield estate. (c) Contracts (a) and (b) combined. Boro' A. Dep. £2 2s. (for each contract).

***South Cambridgeshire R.D.C.**—12 houses at Sawston. Council's A., County Hall, Hobson-st., Cambridge. Dep. £2 2s.

**SEPTEMBER 20.**

***Huddersfield C.B.**—Erection of sec. mod. sch. at Rawthorpe. Geo. Crossley, F.R.I.B.A., Ramsden-st. Dep. £3 3s.

***Lowestoft B.C.**—Rebuilding of war-destroyed houses. F. B. Nunney, Town Clerk. Dep. £2 2s.

**Newcastle-on-Tyne T.C.**—(a) 94 dwellings, and (b) 10 houses. City A., 18, Cloth-market, Newcastle-on-Tyne, 1.

**Reading C.B.**—Erection of extension to house filtration plant with ancillary works at King's Meadow swimming baths. Boro' A. Dep. £2 2s.

**SEPTEMBER 21.**

***Aireborough U.D.C.**—15 houses at Bolton House estate, Yeadon. E. & S. Dep. £2 2s.

**SEPTEMBER 24.**

***Chatham Boro'.**—28 flats, Jenkin Dale. H. D. Peake, B.E. & S. Dep. £3 3s.

***Market Harborough R.D.C.**—Six houses at Saddington and one garage at Fleckney. E. J. Kipps (L.), Council Offices, 42, High-st. Dep. £2 2s.

***Southport C.B.**—Single-storey extension to Floral Hall, Promenade. Boro' A. and Town Planning Officer, Pavilion-bldgs., Lord-st.

**SEPTEMBER 25.**

***Bucks C.C.**—Erection of infants' school at Water Eaton. County A., County Offices, Warton-st., Aylesbury. Dep. £5 5s.

**Ilford B.C.**—22 flats at Claybury estate. B.E. & S. Dep. £5 5s.

**SEPTEMBER 26.**

***Littlehampton U.D.C.**—12 houses at Wickbourne housing scheme. J. A. Young, M.I.Mun.E., Council Offices, Manor House, Littlehampton, Sussex. Dep. £2 2s.

***Martley R.D.C.**—Eight houses together with incidental works. E. J. Turner, 1, The Tything, Worcester. Dep. £2 2s.

**OCTOBER 1.**

***West Riding C.C.**—(1) Extensions to Ecclesfield Monteney Crescent jun. sch.; (2) Additional classrooms at Bentley Kirkby-ave. inf. sch. County A., "Bishopgarth," Westfield-rd., Wakefield. Dep. £2 2s. (in each case).

**OCTOBER 3.**

***Alton R.D.C.**—Six bungalows and ancillary site works, East Tisted housing site. E. Dep. £3 3s.

**OCTOBER 5.**

***Hastings C.B.**—98 houses, Blacklands Farm estate, Hollington. B.E. & S., 37, Wellington-sq. Dep. £3 3s.

***Salop C.C.**—Erection of new central ambulance depot at Shrewsbury. C., Shirehall, Shrewsbury. Dep. £2 2s.

**OCTOBER 18.**

**East Riding Ed. Com.**—Construction to completion of superstructure of Hessle C.E. junior and infants' mixed sch. Johnson and Crabtree, F.R.I.B.A., 20, Priory-pl., Doncaster. Dep. £1 1s.

**OCTOBER 24.**

***Redcar B.C.**—Two blocks of four shops and maisonettes at Dales estate. B.E. Dep. £5 5s.

**NO DATE.**

***Bethnal Green Boro'.**—51 flats, Lansdell-pl. area. T.C. Dep. £5 5s.

***Croydon C.B.**—409 houses in seven groups at New Addington Housing estate. B.E. Dep. £5 5s.

**Stone U.D.C.**—68 houses at Lichfield-rd. Edward Forsham and Greaves, 33, Albion-st., Hanley. Dep. £3 3s.

## ROADS, SEWERAGE AND WATER WORKS

**AUGUST 28.**

**Wolverhampton C.B.**—Completion of Rutland-ave., Penn. B.E. Dep. £2 2s.

**AUGUST 30.**

**Bedfordshire C.C.**—Reconstruction of railway bridge deck at Biggleswade. C.S. Dep. £2.

**SEPTEMBER 4.**

**Carshalton U.D.C.**—Construction of Grove-la.—Stage 1. E. & S., Stone Court, The Grove, Carshalton. Dep. £2.

**SEPTEMBER 5.**

**Bromsgrove R.D.C.**—Roads and sewers at Church-st., Hagley. Folkes and Folkes, FF.R.I.B.A., 34, Hagley-rd., Stourbridge. Dep. £2 2s.

**SEPTEMBER 7.**

**Maidenhead B.C.**—Roads and sewers (stage 2). B.E. & S. Dep. £2.

**Strood R.D.C.**—Roads and sewers on the housing estate at Chapel-la., Grain. E. & S., Council Offices, Frindsbury Hill, Strood. Dep. £5 5s.

**SEPTEMBER 12.**

**Romford B.C.**—Construction of r.c. bridge, carriageway, etc. B.E. & S., Town Hall. Dep. £2 2s.

**SEPTEMBER 14.**

***Salop C.C.**—Paving of school playgrounds. Secretary for Education, County-bldgs., Shrewsbury.

**SEPTEMBER 17.**

**Darlington C.B.**—Lowering and reconstruction of carriageway under North-rd. B.S. Dep. £2.

**Southampton C.B.**—Making-up of various streets. B.E. & S. Dep. £2 2s. (for each street).

**Wolverton U.D.C.**—Sewage disposal works. W. H. Radford & Son, Albion-chbrs., King-st., Nottingham. Dep. £3 3s.

**SEPTEMBER 19.**

**Shardlow R.D.C.**—Sewerage and sewage disposal works in the parish of Morley. Elliot and Brown, Stanley House, Pelham-rd., Nottingham. Dep. £3 3s.

**SEPTEMBER 21.**

**†Horsham R.D.C.**—Main drainage of Southwater. Howard Humphreys & Sons, Victoria Station House, 191, Victoria-st., S.W.1. Dep. £5 5s. Tenders by September 28.

**SEPTEMBER 24.**

***Cuckfield R.D.C.**—Pease Pottage sewerage scheme. A. Hutchings, M.I.Mun.E. Dep. £2 2s.

**SEPTEMBER 27.**

**Reading C.B.**—Site preparation work at housing site No. 6—Bath-rd. B.S., Town Hall. Dep. £2 2s.

**NOVEMBER 12.**

**Department of Main Roads, Queensland, Australia.**—Construction of 764 ft. long steel and concrete bridge. Secretary, Department of Main Roads, Brisbane, Queensland.

## GENERAL BUILDING WORK

### (LONDON)

**Bethnal Green.**—FLATS.—B.C. propose erection of 51 flats at Lansdell-pl. area.

**Boreham Wood.**—CHURCHES.—L.C.C. plan to build five new churches on housing estate at Boreham Wood.

**Chipping Barnet.**—RESTORATION.—Leslie T. Moore, F.R.I.B.A., 3, Raymond-bldgs., Gray's Inn, W.C.1, is the architect for restoration of Parish Church.

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**Croydon.**—HOUSES.—B.C. to build 409 houses in seven groups at New Addington housing estate.

**East Ham.**—AMBULANCE STATION.—B.C. to erect an ambulance station at Wellington-rd.

**Heston Airport.**—HOUSES.—50 houses for London Airport workers to be erected at north-east corner of the disused Heston Airport (est. cost £106,000). Heston-Isleworth B.C. agreed to advance 90 per cent. of sum to British Airways Staff Housing Society.

**Mortlake.**—OUTBUILDINGS.—Barnes B.C. propose to erect outbuildings at Chertsey Court.

**Richmond.**—ADAPTATIONS.—Surrey C.C. have approved adaptations at King's Club, King's-rd., to form clinic, divisional health office, and ambulance station.

**Southgate.**—CINEMA.—B.C. granted permission for erection of new cinema and car park at Cockfosters-rd., Cockfosters.

**West End.**—FACTORY FLATS.—Marylebone Chamber of Commerce seek L.C.C. approval for proposal to erect blocks of "factory flats" to relieve congested workshops and backroom industries in the West End.

### (PROVINCIAL)

**Aldershot.**—B.C. propose development of housing sites at Boxalls-la., Allden-av., and Tice's meadow to provide for two blocks of four, and two blocks of three, old people's dwellings.

**Ashington.**—U.D.C. approved plans by Northumberland C.C. for fire stn. and 11 firemen's houses. Plans by County A., County Hall, Newcastle-on-Tyne.

**Bedlington.**—U.D.C. to build 20 aged people's houses at Stead-la. and 12 at Clayton-st. Plans by the Surveyor, A. K. Dennis, Council Offices, Bedlington, Northumberland.

**Belper.**—R.D.C. propose 20 houses at Kirk Langley and 14 at Crich.

**Birmingham.**—Ed. Com. included new inf. sch. at West Heath and sec. mod. at Bartley Green (£47,790 and £181,710, respectively) in 1951-2 programme.—West Midlands Baptist (Trust) Assoc. to erect new Church at Hawkesley.

**Blackburn.**—Manchester Reg. Hospital Brd. approved expenditure of £19,100 for extensions and alterations at Royal Infirmary.

**Bolton.**—M.O.H. approved in principle pathology laboratory at District Gen. Hospital, for Manchester Reg. Hospital Brd.

**Burnley.**—B.C. approved plans for tinning-room at Thorney Bank Mill, Nelson-sq., for G. L. Howarth & Co.; alterations at Colne-rd. for Platers & Stampers, Ltd.; and resiting of White Hart Hotel, for Daniel Thwaites & Co., Ltd.

**Caernarvon.**—T.C. propose 100 houses at Llys Meirion estate.

**Chesterfield.**—The Chesterfield Tube Co., Ltd., propose new office block at Alma site, Derby-rd., Chesterfield.

**Clydebank.**—T.C. are to build 40 demonstration houses in a variety of designs of cottages and flats.

**Coventry.**—E.C. approved plans for a comprehensive sch. at Broad-la., Tile Hill neighbourhood unit, at £400,000. City A., D. E. E. Gibson.

**Crook.**—U.D.C. to build 174 houses at Low Willington estate. Council's architects are T. A. Page, Son & Hill, 75, King-st., South Shields.

**Darlington.**—24 houses at Springfield site, for T.C.

**Dudley.**—B.C. approved scheme for adaptations of "The Woodlands" as aged persons' home. Architects are Harvey & Wicks, 177, Hagley-rd., Birmingham.

**Durham.**—Cordingley & McIntyre, The College, Durham, have been appointed architects by C.C. for proposed Durham City College for Further Education and Easington Tech. College.—Cairns & Byles, 8, Osborne-rd., Newcastle-on-Tyne, have been appointed heating and electrical consultants for the schemes, and R. H. Duns, Lambton-rd., Jesmond, Newcastle-on-Tyne, has been appointed quantity surveyor for both projects, in addition to New Penshaw County Sch.

M.L.G. & P. has sanctioned borrowing of the following by the County E.C.:—£230,887 for Spennymoor Grammar Tech. Sch.; £48,384 for erection of Birtley Browns Buildings County Sch.; and £15,000 for the completion of Stockton Oxbridge-av. Grammar Sch.

C.C. to apply for loans not exceeding £400,000 for education works, provision of hostels for aged people, ambulance depots and children's long-stay homes.

**Great Hucklow.**—P.C. propose erection of children's holiday home as memorial to Rev. Chas. Peach.

**Harrogate.**—T.C. propose erection of bathing-pool at Royal Hall Gardens, to cost £46,000.

**Lancs.**—Ed. Com. seek loan of £49,870 for Worsley Mount Skip proposed County Prim. Sch.—Received M.O.E. approval for Phase III of I. M. Marsh College of Physical Education.—To include inf. and jun. sch. at Kirby South Housing estate in 1952 programme.

1952-3 programme is to be composed as follows:—Prescot & Huyton Girls' Grammar (£179,520); Penketh County (New Inf. Dept.) (£30,800); Golborne sec. mod. (£179,520); Droylsden Littlemoss sec. mod. (£179,520); Gt. Crosby R.C. sec. mod. (£134,640); Kirkby South R.C. (Phase I) (£49,280); Kirkby South County (Phase II) (£43,120); Golborne Culcheth County (£86,240); Whitefield Higher-la. sec. mod. (£179,520); Middleton Bowlee R.C. (Phase I) (£49,280); Middleton Bowlee County (Phase II) (£43,120); and Stretford St. Hilda's C.E. (£43,120).

**Leamington.**—T.C. approved recommendation by General Purposes Com. for restoration of Pump Tea Room, at £20,000.

**Lichfield.**—T.C. propose erection of 1,000 houses in five-year development plan, at est. cost of £1,600,000.

**Middlesbrough.**—Hetherington & Wilson, County-chbrs., Westgate-rd., Newcastle-upon-Tyne, are architects for all alterations and rebuilding scheme for Dickson & Benson, Dundas-st., Middlesbrough.

**Middleton.**—B.C. to erect 20 houses for B.E.A. personnel and 100 houses for key workers.

**Newcastle-on-Tyne.**—Land at Blakelaw estate is to be appropriated by T.C. for proposed health centre. City A., George Kenyon, 18, Cloth-market, Newcastle.

**Northampton.**—R.D.C. propose eight houses each at Brafield, Bugbrook, Duston, Hackleton and Nether Heyford.

**North Shields.**—R. Irving & Co., Ltd., to build fish-oil factory at North Shields. Architects are Tasker & Child, Trinity-bldgs., New Bridge-st., Newcastle.

**Northumberland.**—Ed. Com. to provide additional accommodation of "Orlit" huts at Lynemouth, Haydon Bridge, Gosforth, Hexham, Lemington, Cramlington, Ponteland, Allendale, Haltwistle, Newburn, Otterburn, Morpeth, Monkseaton, Alnwick, and Bedlington schools, at a cost of £90,000. —County Welfare Committee's proposals for an aged persons' home, to cost £21,000, at Berwick have been approved.—Similar amount is to be spent on home at Wallsend to serve the south-east of Northumberland.

**Oldham.**—B.C. propose shops at Strinesdale estate. Cameron & Middleton, Manchester, are the quantity surveyors.

**Oundle.**—U.D.C. to prepare plans for 12 houses at Glapthorne estate.

**Padiham.**—U.D.C. seek loan of £25,510 for 20 bungalows at St. Giles-st. site.

**Rochdale.**—Ed. Com. propose jnr. sch. at Spotland, and nursery sch. at Lenny Barn.

**Runcorn.**—U.D.C. propose extensions to Lowlands-rd. Depot, at est. cost of £36,000.

**Runcorn.**—R.D.C. propose 24 houses at Cobbs Quarry extension, Appleton; 16 at Bridge-la. extension, Frodsham; 12 at Chester-rd., Preston Brook; and eight at Moss-la., Manley.

**Runcorn.**—U.D.C. propose 36 flats at Town Hall estate and approved plans for new offices and messroom at Rocksavage Works, for I.C.I., Ltd.; canteen at Wigg Works East, for I.C.I., Ltd., and extensions to Sale Works canteen, for I.C.I., Ltd.

**Sale.**—Six shops and maisonettes, Baguley-la., for B.C. Architects, Cordingley & McIntyre.

**Salford.**—Licence received for rebuilding St. John's Methodist Church, Weaste. Architects are Halliday & Agate, Manchester.

**Seaham Harbour.**—U.D.C. has approved the building of 40 houses at cost of £45,852.

**Seisdon.**—R.D.C. propose erection of houses at White Hill, Kinver.

**Southport.**—Town Planning Com. have approved plan for building 61 flats and 11 lock-up garages at corner of Albert-rd. and Leicester-st.

**Southport.**—B.C. approved plans for extensions to knitting factory at Manor-rd., for Stirling Knitting Co., Ltd.

**Staffs.**—Ed. Com. approved C.P. Schools at Brickhouse Farm, Rowley Regis, and at Wheel-la., Lichfield; adaptations at Rangemore Hall, Burton-on-Trent, to form Needwood Special School, and extensions to Cannock Mining College.

**Stanley.**—U.D.C. to build 38 houses at Burnopfield. Architect is J. R. Heslop, Council Offices, Stanley, Co. Durham.

**Stone.**—R.D.C. propose further 150 houses at Blythe Bridge and Eccleshall.

**Stourbridge.**—B.C. to erect block of six shops, maisonettes and flats at Norton estate.

**Wallsend.**—T.C. has been asked by M.L.G. & P. to provide modified scheme for proposed additions to the corporation baths. Architects are Percy L. Browne, Son & Harding, Pearl-bldgs., Northumberland-st., Newcastle-on-Tyne.

**West Lancs.**—R.D.C. approved erection of offices, store rooms, and three-bay workshops at Southport-rd., Lydiate, for Mr. F. Gatley.

**Wolverhampton.**—E.C. approved plans for inf. sch. at Rake Gate.

## TENDERS

* Denotes *accepted.*
† Denotes *provisionally accepted.*
‡ Denotes *recommended for acceptance.*
§ Denotes *accepted subject to modifications.*
¶ Denotes *accepted by H. M. Government Departments.*

**Acham.**—40 houses at Ford, for R.D.C.: *Shutt & Co., Wolverhampton,. £50,108.

**Bedlington.**—32 houses at Stead-la. and Clayton-st., Bedlington Station, for U.D.C.: *Direct Labour.

**Bishopbriggs.**—Nine houses at Breckenbrae-ave. Mr. Norman MacFadyen, 137, West Regent-st., Blythswood, Glasgow, W.C.2. *John Lawrence & Co. (Glasgow), Ltd., Blythswood, Glasgow, W.C.2.

**Blaydon.**—Erection of hostel at Winlaton, for Durham C.C. County A., G. R. Clayton, Court-la., Durham: *Applebys (Builders), Ltd., 15, Trafalgar-st., Newcastle-on-Tyne, £27,568.

**Burnley.**—Erection of Heasandford technical high school, for E.C.: *Birch (Harrogate), Ltd., £62,626.

**Buteshire.**—Scheme of houses at East Colmac, for C.C. Mr. Robert Rennie, architect, 112, Hamilton-st., Saltcoats, Ayrshire. Excavation, brick, and building work: *J. Allan & Johnstone, Glasgow; joinery, carpentry and allied work: *W. N. Jenkins, Rothesay. (Other contracts let.)

**Clitheroe.**—44 dwellings at Low Moor site No. 2, for T.C.: *Gregory Flats, Ltd., Worthing, £50,563.

**Darlington.**—Houses and flats for T.C. Boro' A., E. A. Tornbohm: *Direct Labour, £16,840.

**Darlington.**—10 houses at Lunedale-rd.: *Bussey & Armstrong, Brinkburn-rd., Darlington.

**Derby.**—Erection of new clinic, Rykneld sch., Derby, for C.B. Boro' A., The Council-hse., Corporation-st., Derby: *Holmes & Sons, Ltd., Navigation Bridge, London-rd., Derby, £8,413.

**Derby.**—Erection of proposed new prim. schs. at Walthamstow-dr., Mackworth estate, for C.B. Boro' A., The Council House: *Direct Labour, £121,417.

**Falkirk.**—Two housing schemes for the corporation. Mr. William Gibson, F.R.I.B.A., architect, Municipal Housing Officer, West End, Falkirk. *John Wright & Co., Bainsford. *The Weir Housing Corporation, Ltd., Whifflet, Coatbridge, £68,250 and £41,730.

**Felling.**—40 houses at Ellen Wilkinson estate, for U.D.C. Plans by Housing Officer: *G. Wimpey & Co., Ltd., Jesmond, Newcastle-on-Tyne, £57,566 (subject to M.L.G. & P. approval).

**Glasgow.**—New two storey suite and offices at Alexandra-par., Dennistoun, and other extension works. Messrs. Cullen, Lockhead & Brown, FF.R.I.B.A., 119, Cadzow-st., Hamilton. *Hugh Bradley & Co., Ltd., Govan, Glasgow, S.W.2.

**Great Yarmouth.**—Erection of houses at Magdalen College estate, Gorleston, for C.B. Quantities by Philip Pank, Esq., F.R.I.C.S., Queen-st., Great Yarmouth: *Mr. T. V. Palmer, Pier Plain, Gorleston, £9,048 (8); *Mr. J. Cooper, "Panama," Burgh-rd., Gorleston, £33,747 (30); *H. A. Holmes & Sons, Ltd., South Ice House-hill, Gorleston, £108,471 (96); *Harris & Andrews, Ltd., Alpha-rd., Great Yarmouth, £13,658 (12); *J. Cooper, "Panama," Burgh-rd., Gorleston, £3,215 (2).

**Greenwich.**—Erection of (a) four shops with six flats over at The Village, Charlton, and (b) 18 flats at Greenwich High-rd., for B.C. C. H. Jennings, M.Eng., M.I.C.E., Boro' E. & S., and quantities by G. F. K. White, F.R.I.C.S.:—

(a):—

| | |
|---|---|
| Gee, Walker & Slater, Ltd. | £32,875 |
| Griggs & Son, Ltd. | 22,400 |
| Bunting Construction, Ltd. | 20,750 |
| F. Troy & Co., Ltd. | 20,400 |
| Thomas & Edge, Ltd. | 19,989 |
| Halse & Sons, Ltd. | 19,794 |
| L. H. Mildwater & Sons | 19,560 |
| *Walter Gladding & Co., Ltd. | 18,300 |

(b):—

| | |
|---|---|
| Griggs & Son, Ltd. | £42,190 |
| L. H. Mildwater & Sons | 41,617 |
| F. Troy & Co., Ltd. | 39,287 |
| Thomas & Edge, Ltd. | 38,340 |
| Halse & Sons, Ltd. | 38,257 |
| Bunting Construction, Ltd. | 37,148 |
| Walter Gladding & Co., Ltd. | 34,930 |
| *Gee, Walker & Slater, Ltd. | 34,465 |

**Heston and Isleworth.**—Eight flats and six shops at Hounslow West estate, for T.C. O. P. F. Hilton, Esq., A.M.I.C.E., A.R.I.C.S., Boro' E. & S., and quantities by J. McBain & Partners:—

| | |
|---|---|
| Frank Bartlett, Ltd., W.12 | £19,385 |
| Cawood Wharton & Co., Ltd., S.E.7 | 18,543 |
| H. & F. Farrell, Ltd., Sutton | 18,221 |
| J. A. Tyler & Sons, Ltd., S.W.3 | 17,784 |
| Fox & Champion, Ltd., Isleworth | 17,250 |
| General Housing Co., Ltd., W.5 | 16,694 |
| Co-Partner Building Operatives, Ltd., Sunbury-on-Thames | 15,540 |
| Allied Building Craftsmen (Mayfair), Ltd., W.1 | 15,388 |
| The Building & Public Works Construction Co., Ltd., Swindon | 15,227 |
| Arthur Watson, Ltd., Isleworth | 14,843 |

**Horsham.**—19 housing units and site works at Orchard-rd. and MacLeod-rd., Horsham, for U.D.C.:—

| | |
|---|---|
| Y. J. Lovell & Son, Ltd., Bishopric | £23,188 |
| Higgins & Edwards, Ltd., Horsham | 22,880 |
| Geo. Potter, Ltd., Horsham | 22,441 |
| R. Vinall (Henfield), Ltd., Sussex | 20,920 |

**Lanarkshire.**—Reconstruction work at Garnkirk area. Col. James B. Murray, M.Inst.C.E., etc., County-chbrs., Beckford-st., Hamilton. *Daniel Campbell (Contractors), Ltd., Strathavon, £7,600.

**Lanarkshire.**—152 houses on the Brachead housing site, Tannockside. Mr. Samuel MacColl, A.R.I.B.A., architect, County-chbrs., Beckford-st., Hamilton. *The Weir Housing Corporation, Ltd., Whifflet, Coatbridge, £220,140.

**Leek.**—Houses at Haregate estate, for U.D.C.: *Tideswell Bros., Ltd., Hollins-st., Shelton, Stoke-on-Trent, £27,125 (19); *Frost & Co. (Builders) & Contractors), Ltd., £16,889 (18).

**¶London (Admiralty).**—Particulars of contracts placed by Civil Engineer-in-Chief's Dept., Admiralty:—

*Machrihanish*: Internal and external decoration of buildings, Wm. McKerracher & Son, 198, Albert-dr., Glasgow, S.1. *Abbotsinch*: Painting work, Mr. Sunter Hastie, 121, West Regent-st., Glasgow, C.2.

**London (Air Ministry).**—Works contacts to value of £500 or over for week ended August 18.

*Building work for Airfield Lighting*: Wilson Lovatt and Sons, Ltd., Clarence-st., Wolverhampton. *Artificers' Works*: Catons (Sale), Ltd., 72, Washway-rd., Sale, Cheshire; Thos. Cotton, Ltd., Moon-la, Mansfield, Notts.; F. and D. Lucas, 147, Castle-st., Salisbury; Peter Conlon, 84, Seymour-gr., Old Trafford, Manchester; Walter Lawrence and Son, Ventnor House, Swaffam, Norfolk; F. Parkinson, Ltd., Mowbray-dr., Blackpool; Kerridge (Cambridge), Ltd., Sturton-st., Cambridge; Norman Oldham, Ltd., 14a, Mundy-pl., Cardiff.

*Agricultural Maintenance*: E. S. Walley and Co., Ltd., 135, Sankey-st., Warrington. *Building construction work*: Geoge Dawson and Son (cttrs.), Ltd., Mentmore-rd., Linslade, Leighton Buzzard *Construction of Hard Standings*: M. and F. O. Foster and Co., Ltd., 23, York-rd., Hitchin, Herts. *Construction of Concrete Overlays*: A. Richmond and Sons, West-st., Retford, Notts. *Repairs to Runways and Perimeter Tracks*: Macartney, Ltd., 27, Albemarle-st., W.1. *Resurfacing Work*: General Asphalte Co., Ltd., 41-49, Gt. Peter-st., S.W.1; Neuchatel Asphalte Co., Ltd., 58, Victoria-st. S.W.1; Limmer and Trinidad Asphalte Co., Ltd., Tothill-st., Westminster, S.W.1; Western Trinidad Lake Asphalte Co., Ltd., St. Mary-st., Cardiff; Wirksworth Quarries, Ltd., 286, Pentonville-rd., N.1; Roads Reconstruction (1934), Ltd., Stoneleigh House, Frome.

**London (British Railways).**—New contracts placed by London Midland Region:—Supply of labour in connection with cleaning and painting of Guide Bridge station; Newton station; Godley station; and Mottram and Broadbottom station: R. Ridd & Sons (Contractors), Ltd., 7, Burntwood-av., Hornchurch, Essex. General building work in connection with new chain store, main store and metal store at Bow locomotive works, London: The Demolition & Construction Co., Ltd., 3, St. James's-sq., London, S.W.1. 36-in. diameter protected metal extract roof ventilators for machine shop, erecting shop north and erecting shop south at Crewe locomotive works: Cellactite & British Uralite, Ltd., Cellactite House, Whitehall-pl., Gravesend, Kent. Reconstruction of the superstructure and provision of new trestle to bridge No. 36, carrying Green-la. over railway at Ince station, for Lancashire C.C.: Leonard Fairclough, Ltd., Chapel-st., Adlington, Lancs. Supply and erection of steelwork for renewal of carriage shed roof at Accrington: John Booth & Sons (Bolton), Ltd., Hulton Steelworks, Bolton. Recovering of Manchester Central station roof with Robertson's protective metal sheeting: Industrial Engineering, Ltd., Mellier House, Albemarle-st., London, W.1.

**¶London (M.O.W.).**—Contracts placed by M.O.W. for week ended August 11, 1951:—

*London*: Bowes Park T.E., Extension, T. W. Rodger & Sons, 135a, High-st., Barnet, Herts; Seaford House, Belgrave-sq., S.W.1, Internal decs., Sykes & Son, Ltd., 8, Essex-st., Strand. *Bedfordshire*: Elstow, Erection of telephone repeater station, Samuel Foster, Ltd., Kempston, Bedford. *Essex*: Burnham-on-Crouch, Erection of shell fish research station, Pitchers, Ltd., 57, Ashburton-gr., Holloway, N.7.

*Midlothian*: Duddingston House, Edinburgh, Erection of hutted accommodation, Hanratty & Paul, 74, Leith-walk, Edinburgh. *Nottinghamshire*: Prison Commission, Gringley-on-the-Hill, Notts, Erection of eight houses, T. Jenkinson & Son (Doncaster), Ltd., Bentley-rd., Doncaster.

*Somersetshire*:—Admiralty T.O.B., Block B, Foxhill, Bath, Somerset, Alterations and decorations, F. J. Blackmore & Son, Ltd., Argyle House, Twerton, Bath. *Warwickshire*: P.O. Radio Station,

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Conversion of blocks A, B and C into flats, etc., Thomas Bates & Son, Ltd., 51, Warwick-st. Coventry. *Wiltshire*: Air Ministry, Gorse Hotel, Hawthorn, Wilts, Internal decorations, Smith & Lacy, Ltd., 21, Station-rd., Corsham, Wilts.

¶**London (War Dept.).**—Works contracts placed by War Dept. for week ended August 11, 1951:—*Carnarvonshire*: Roadwork, Apex Asphalters, Ltd., Stockport. *Lancashire*: Roofing, Manchester Slate Co., Ltd., Rusholme. *Nottinghamshire*: Painting, Macartney, Ltd., London. *Yorkshire*: Painting and decorating, Topham Bros., Ltd., Harrogate; Miscellaneous, J. Roxby Surtees, Ltd., Blackhill. *Lincolnshire*: Hutting, F. Hossack & Son, Sleaford. *Nottinghamshire*: Painting and decorating, Harold G. Oates, Ltd., Bradford. *Middlesex*: Painting, Fields, Ltd., London, S.W.1. *Kent*: Roadwork, W. H. Bensted & Son (Contractors), Ltd., Maidstone. *Hampshire*: Boiler installation, C. W. Hinchliffe, Bournemouth. *Wiltshire*: Building work, Structural Eng. Co. (W. J. Cearns, Ltd.), London, E.15; Roadwork, Roads Construction (1934), Ltd., Frome.

**Maidstone R.D.C.**—18 houses at Nettlestead, *R. Lawrence and Sons, £25,696; 4 flats at Barming, *J. H. Filmer, £3,999.

**Manchester.**—Adaptations at London-rd. fire station for T.C.: *G. Margolis & Co., Manchester.

**Middlesbrough.**—54 houses at Berwick Hills, for T.C.: R. Jones (10); L. Connolly (10); R. C. McInnes (12); W. Taylor & Son (12); and D. E. Dixon (10).

**Northampton.**—16 flats and bungalows at Spencer estate and eight flats at Abingdon, for T.C.: *W. J. Richardson, Northampton, £7,961 and £15,931.

**Rotherham.**—Extensions at Spurley Hey secondary school, for E.C.: *Parkin (Rotherham), Ltd., Bawtry-rd., Rotherham, £13,952.

**Runcorn.**—101 houses at Town Hall estate, for U.D.C.: *W. E. Jones, £138,810.

**Stanley.**—38 houses at Birch-cres., Burnopfield, for U.D.C.: *Direct Labour, £51,528.

**Stoke-on-Trent.**—Houses for T.C.:—46 at Lyme-rd. Meir estate: *Morgan Building Co., £56,846; 16 at Hilton-rd. Harpfields estate: *J. W. Walton, £19,677; 10 at Lyme-rd. Meir estate: *W. D. Cooke & Co., £12,939; 16 dwellings at Fenton-rd., Bucknall: *Peers & Owen, £14,424.

**Sutherlandshire.**—New Kyle of Lochalsh pier. Messrs. Blyth & Blyth, M.Inst.C.E., 125, George-st., West End, Edinburgh. *A. A. Stuart & Sons (Glasgow), Parkhead, Glasgow.

**Wakefield.**—40 houses for R.D.C.: *Duncan Mann & Sons, Kirkhamgate, Wakefield.

**Wallsend.**—Erection of beam shed at Neptune Works of Swan, Hunter & Wigham Richardson, Ltd. Engineers, T. F. Burns & Partners, Victoria-st., Westminster, London: *Elliott Bros., Otterburn-ter., Jesmond, Newcastle-on-Tyne.

**Wallsend.**—Erection of fabricating shop, for Parsons Marine Steam Turbine Co., Ltd.: *A. & J. Main & Co., Glasgow.

**Wallsend.**—Erection of brass shop, for North-Eastern Marine Engineering Co., Ltd.: *Lambhill Iron Works, Lambhill, Glasgow.

**West Bromwich.**—66 houses at Yew Tree Farm estate, for B.C.: *S. J. Smith (Bidford), Ltd., Smith-rd., Wednesbury.


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